

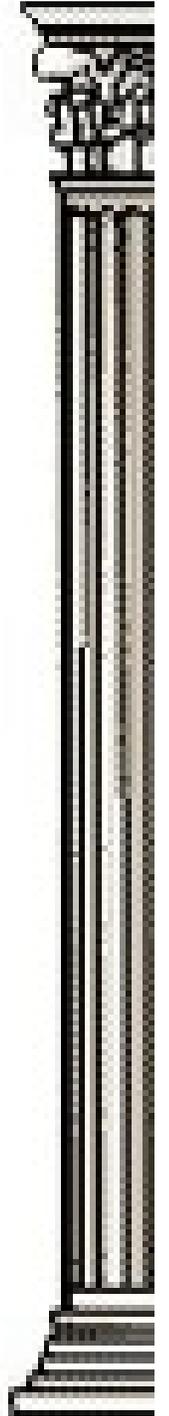


# History of Architecture

70996

Francis Mayen

October 19, 2017



500,000—35,000 BCE  
 Lower Paleolithic  
 Fire, very primitive language, burials, stone tools and weapons (actual shape of rock) - some manipulation of rocks



230,000—28,000 BCE  
 Neanderthals  
 Lived across Europe and Southwest Asia, From Britain to Iraq. Skilled Hunters. Tools. Capable of speech. Social. Cave Dwellers. Bodies found buried with tools and bear meat—some scholars suggest a belief in an afterlife.

200,000 BCE  
 Emergence of Homo Sapiens in Ethiopia. Archaeological evidence suggests burial rituals; simple tools. Migrate out of Africa into Asia and Europe.

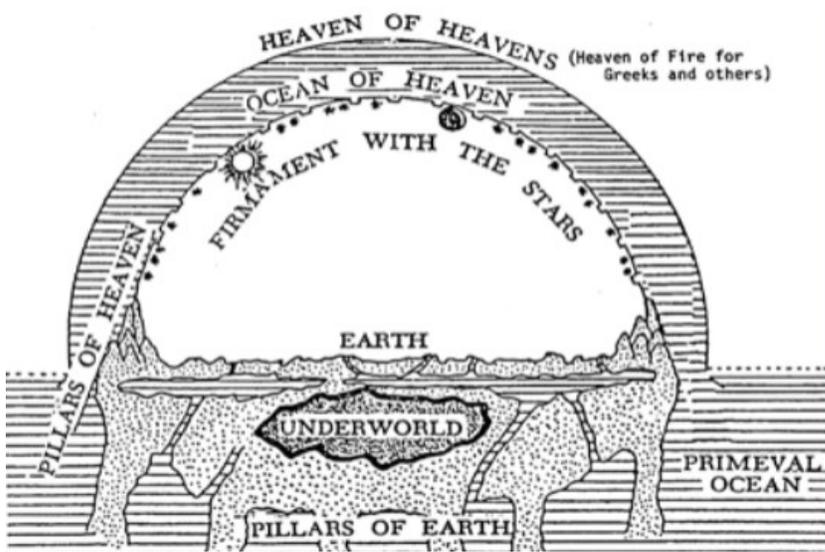
40,000 BCE  
 Modern Humans (Cro-Magnon Man) appear in Europe. Interact with Neanderthals. Eventually Neanderthals die out, possibly due to competition over resources.

35,000—10,000  
**Upper Paleolithic**  
 Chauvet  
 35,000 BCE  
 Bone needles, harpoons, fish hooks, darts, magic, art, cooking.



.c.a. 10,000—7,000 BCE  
 Mesolithic  
 Moving from nomadic hunter gatherer to settled agriculture

.c.a. 7,000—4,000  
 Neolithic  
 Agriculture  
 Pottery, clothes, jewelry  
 Villages, institutions, class systems  
 Domestication of animals



Upper Paleolithic c.a. 35,000—10,000 BCE

- ⇒ Burials, Ritual and Ancestor Worship
- ⇒ Cave painting
- ⇒ Shamanism
- ⇒ Animism
- ⇒ "Venus" figurines
  - Moon
  - Mene
  - Mensis
  - Mensura



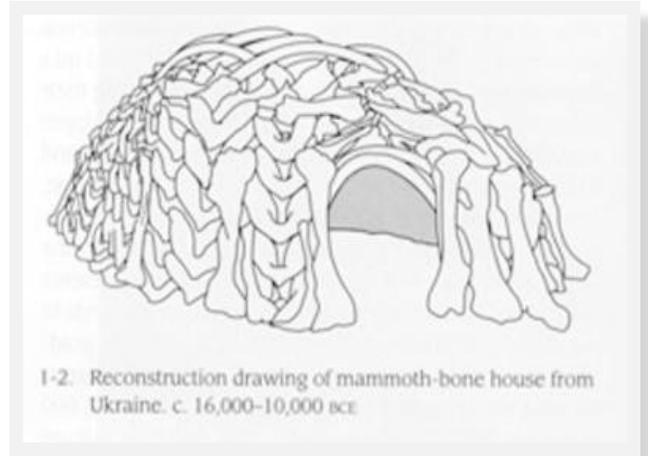


# Mammoth Huts

(12000 BCE)

## Central Russian Plain (Today's Ukraine) 1400 BCE

- ⇒ Huts were the earliest huts to be discovered
- ⇒ Constructed of mammoth bones and pine poles, with a lining of animal skins and a central hearth, the largest dome-shaped hut incorporated skeleton parts from nearly a hundred mammoths in its framework.
- ⇒ The fact that they buried their dead in a ritualized manner on their sides in a flexed position indicates that they had probably developed at least a rudimentary religious consciousness.



1-2. Reconstruction drawing of mammoth-bone house from Ukraine. c. 16,000-10,000 BCE

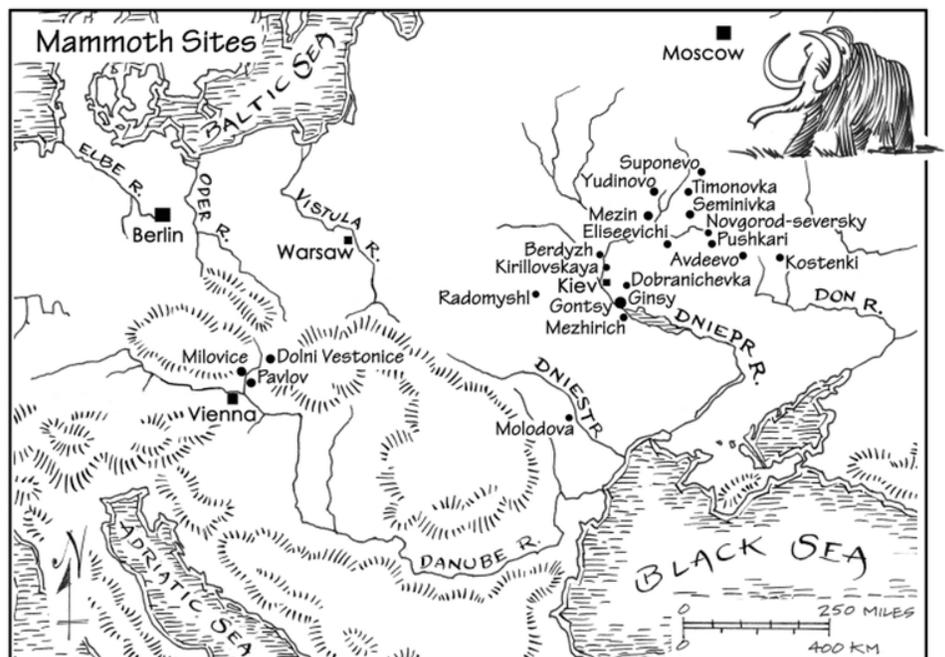
Humans lived by hunting and gathering. The game during this period included mammoths, the woolly rhinoceros, bison, deer, wolves, and bears.

As the population grew during this period, hunting and gathering remained primary occupations, with evidence indicating considerable improvements in hunting technology and organization.

## PREHISTORY

Human settlement seems to have originated at the small clan or family level, with a sufficient number of people living together to provide mutual assistance in hunting and food gathering and joint protection against enemies.

It is believed that these groups may have been matriarchal and matrilineal.



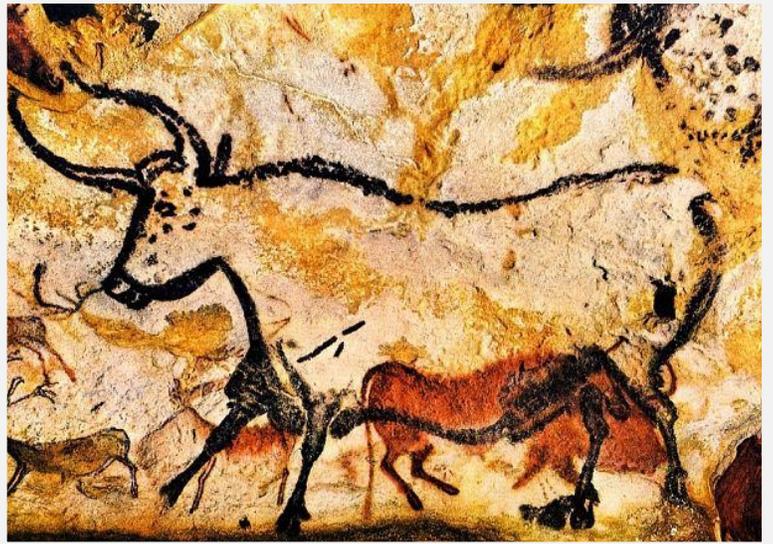
# Lascaux Cave Paintings

(12000 BCE)

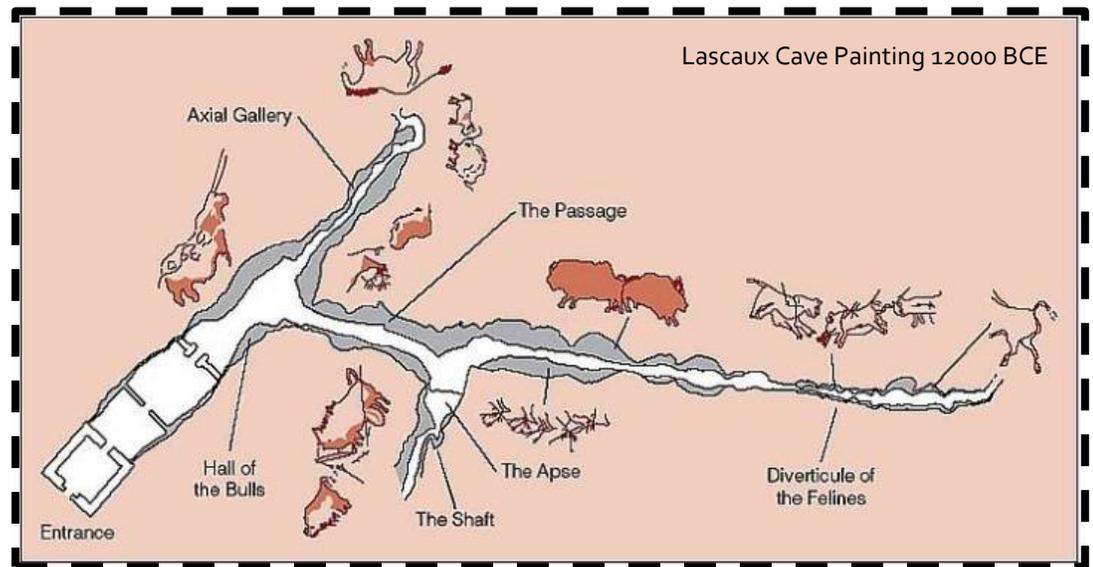
## Dordogne region of southwestern France

- ⇒ Complex cave with several areas that was discovered by a group of teenagers in 1940
- ⇒ The cave contains nearly 2000 figures, ranging from animals native to the region at the time, human figures and abstract signs.
- ⇒ Most images have been painted onto the walls using mineral pigments
- ⇒ There are no images of reindeer, even though that was the principal source of food.
- ⇒ *The Crossed Bison* is held as an example of the skill of the Paleolithic cave painters, it shows their ability to use perspective.

Some anthropologists and art historians theorize that the paintings could be an account of past hunting success, or could represent a mystical ritual in order to improve future hunting endeavors.



Lascaux Cave Painting 12000 BCE



## Ugarit

(7000 BCE)

Baal—storm god. Patron deity of Ugarit

Dagan—Baal's father

El—Chief god

Athirat—consort to El. Mother of the Gods. Asherah

Yam—god of sea

Attart—Goddess

Athtar—masculine counterpart to Athtart—the planet Venus. Shahr (Isaiah 14 (Bright one of the dawn)) and Shalem—patron deity of Jerusalem (Uru—Salim: City of Shalem

Mot—personification of death

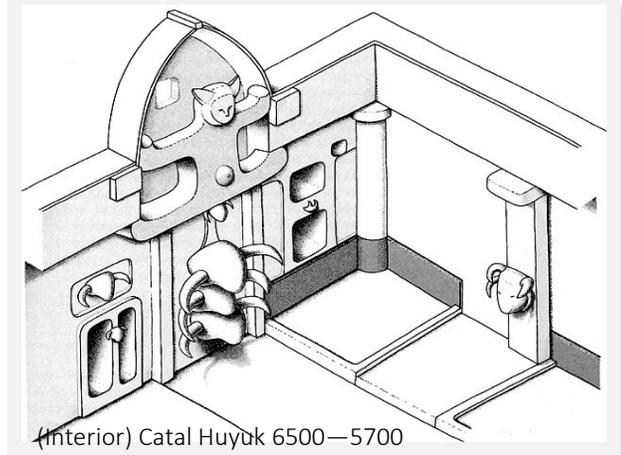
# Catal Huyuk

(6500-5700 BCE)

## Anatolia (Present day Turkey)

- ⇒ The inhabitants were farmers and hunters who buried their dead below the hut floors.
- ⇒ Residents gained access to the dwellings across roofs, while high openings in the walls were for ventilation.
- ⇒ Mud-brick walls and a post-and-lintel timber framework enclosed rectangular spaces that abutted the neighboring houses so that together they established a perimeter town wall.
- ⇒ Interspersed with the houses were windowless shrines containing decorative motifs of bulls and cult statuettes of deities.
- ⇒ Catal Huyuk was composed entirely of domestic buildings with no obvious public buildings. Though some of the larger ones have rather ornate murals.
- ⇒ No evidence of apparent social classes, belonging to royal or religious hierarchy. Men and women were equals.

Catal Huyuk 6500—5700 BCE



# Megalithic Tomb at Er-Marne

(4200 BCE)



Poulnabrone dolmen 4200 BCE

## Western Europe

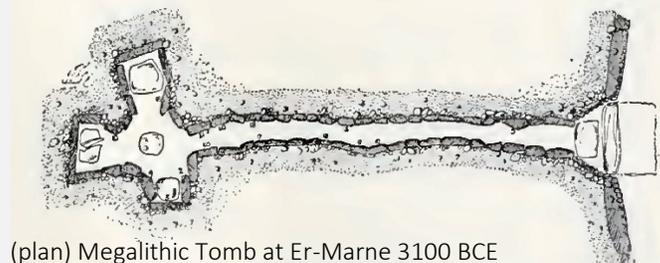
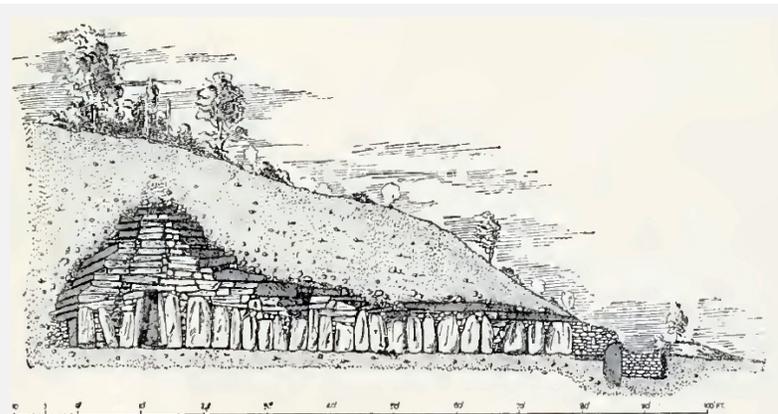
The Significant prehistoric architectural achievements of western Europe were megalith constructions, composed of large stones or boulders, many of which were erected for astronomical observatories or communal tombs for the privileged classes.

## Newgrange Passage Grave—Country Meath, Ireland, ca. 3100 BCE

An earthen mound nearly 300 feet in diameter and thirty-six feet high covers the tomb, with the weight of the soil providing stability for the megaliths below.

The whole construction is carefully oriented so that, in the five days around the winter solstice, light from the rising sun enters through the doorway and a transomlike light box, creeping along the passage to illuminate the chamber within for about fifteen minutes.

Many archaeologists believed that the monument had religious significance, such as a place of worship for a “cult of the dead” or for an astronomically-based faith. However studies interpret other possible functions, which center on astronomy, engineering, geometry and mythology . It is speculated that the sun formed an important part of the religious beliefs, and that the room was designed for a ritualistic capturing of the sun on the shortest day of the year.



(plan) Megalithic Tomb at Er-Marne 3100 BCE

(entrance) Megalithic Tomb at Er-Marne 3100 BCE

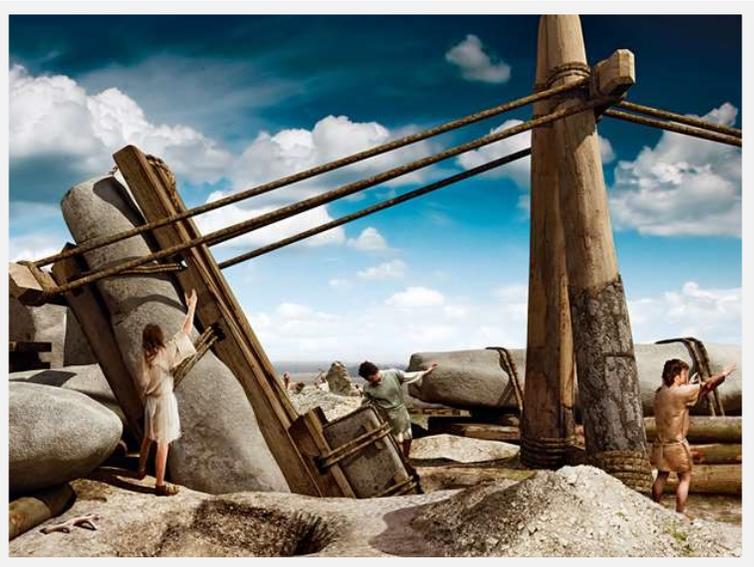




- ⇒ The first phase began with excavation of two concentric circular ditches. Inside the perimeter, fifty-six evenly spaced holes were dug and filled with chalk, while a northeasterly line of sight to the horizon was established from the center across a pointed upright outside the ditches.
- ⇒ The second phase consisted of adding the Wooden poles
- ⇒ The third stage involved the transportation .These were erected in a circle of thirty uprights enclosing five trilithons arranged in a U shape to focus on the avenue, the axis toward the heel stone. Knobs cut on the tops of the uprights fit into socket holes caved on the undersides of the lintels, so that the stones lock together in a mortise-and-tenon joint when correctly positioned.

Stonehenge is aligned to the rising sun at midsummer and the procession of time and the seasons, and the movements of the sun and moon, were highly significant to prehistoric people.

Monuments of varying types, built over long



Recreation of construction of Stonehenge

periods were  
now

(2900—1400 BCE

incorporated onto artificial ‘ritual landscapes’. Presumably these were the setting for elaborate religious ceremonies, possibly connected to preoccupation with the fertility of people, animals and crops.

Stonehenge 2900—1400 BCE



# Sumerians



Standing male worshiper 2900—2600 BCE

## Mesopotamia (Iraq)

At Ubad, Indo-Europeans from the steppes of central Asia migrated into southern Mesopotamia and settled in Euphrates, and known as Sumerians.

The typical form of their settlements was the city-state, a political and religious center devoted to serving gods based on natural elements.

They believed that human beings were created from the alluvial silt deposits in the river valleys to serve the gods and to relieve them of suffering.

## Tempe Gawra

(5000 BCE)  
Iraq

Urban communities developed around religious shrines, the dwelling places of the gods and the repositories for surplus food stores, and therefore there were monumental temple complexes.



⇒ Important buildings were given additional durability by having weather-resistant casings for the brick, and greater dignity by being raised on a platform.

Dieties included the divine triad

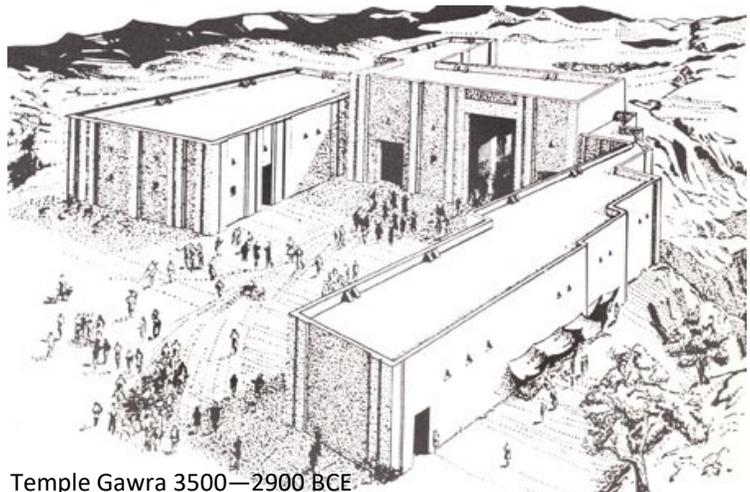
Anu god of the sky  
Enlil god of the earth  
Ea god of water

Nannar god of the moon,  
Utu god of the sun

## MESOPOTAMIA

The distinction between the prehistoric world and historic times involves the development of written language, which was achieved by about 3500 BCE by the Sumerians in the Middle Eastern lands of present-day Iraq and Iran.

Writing first developed as means of documenting governmental transactions .



Temple Gawra 3500—2900 BCE



# Assur

(2500 BCE)

## Ashur (Iraq)

⇒ The inner city was protected by encircling walls nearly 2.5 miles

⇒ On the eastern side Ashur was washed by the Tigris, along which massive quays .

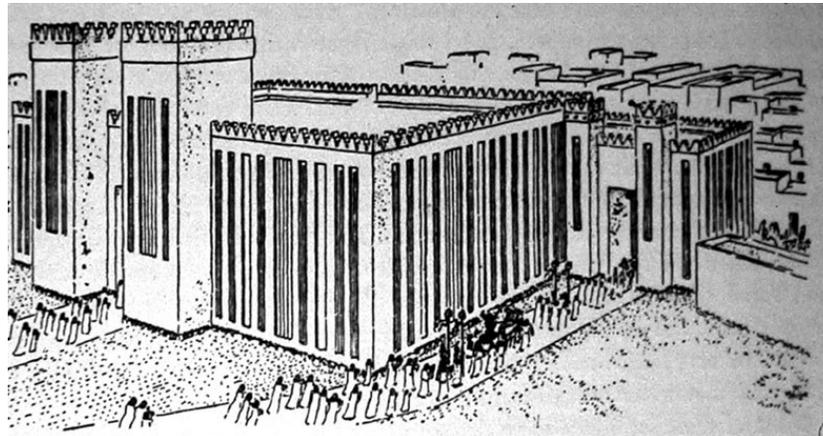
⇒ On the north side an arm of the river and a high escarpment afforded natural defenses, which were

augmented by a system of **buttressed walls** and by a powerful sally port —a semicircular tower of rusticated stone masonry.

Though each city built on its predecessors becoming ever more elaborate, they always echoed the great city of their god, Ashur.

Ashur was built on a triangular plot

overlooking the Tigris valley. To the east, it was guarded by the Mahkul mountain ranges where it was believed that the god Ashur resided. Surrounding the rest of the city was the Tigris River and the small off-shooting river, Zab. Public buildings lined a steep slope of rock near the northern edge of town.



The temple of Ashur and a great **Ziggurat** (massive terraced step pyramid) occupied the most prominent position of the town. Adjacent to the temple stood the old Palace of the king who was also the main priest of the god, Ashur. Near the palace, other important structures including the twin temples of Anu and Adad, the temples of Sin and Samas and the temple of Ishtar framed the cliff.

(ruins) Ashur 2500 BCE



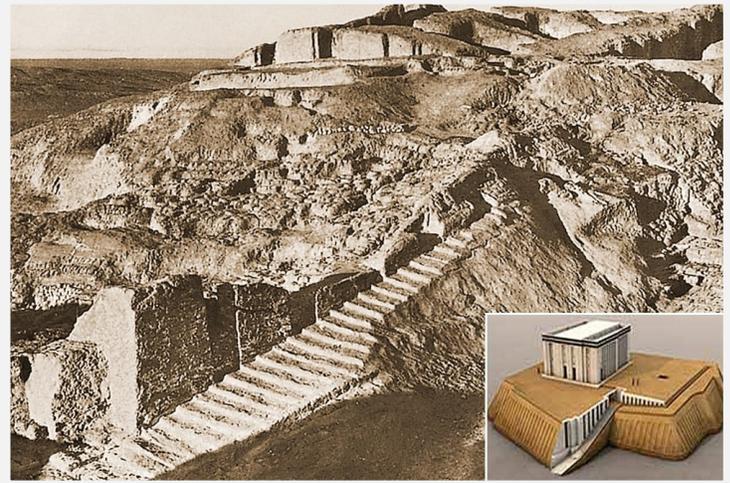
# White Temple of Anu

(3500-3000 BCE)

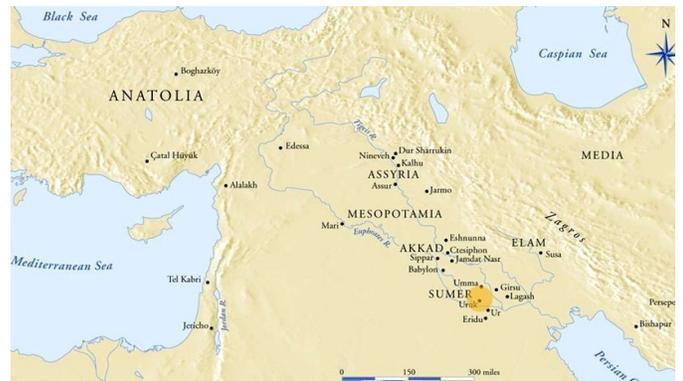
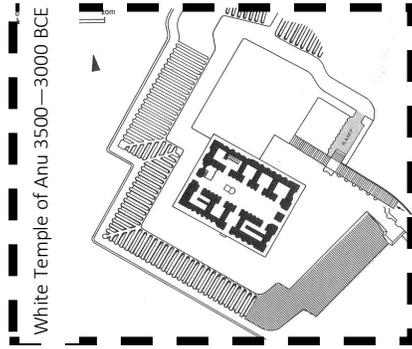
## Iraq

- ⇒ Many temples were erected on raised platforms.
- ⇒ Bases of temples were made in part with the rubble from previous buildings on the site, buttressed in a regular pattern and protected by layers of white-wash.

The White Temple had three entrances, none of which faced the ziggurat ramp directly. Visitors would have needed to walk around the temple, appreciating its bright façade and the powerful view, and likely gained access to the interior in a “bent axis” approach (where one would have to turn 90 degrees to face the altar), a typical arrangement for Ancient Near Eastern temples.



White Temple of Anu 3500—3000 BCE



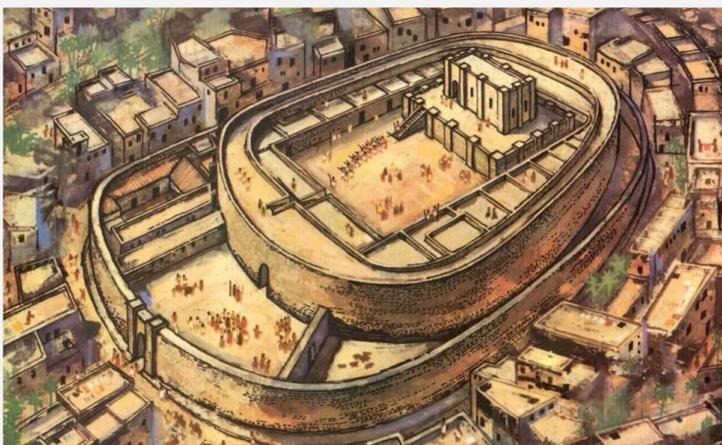
# Khafaje Temple

(3000—2500 BCE)

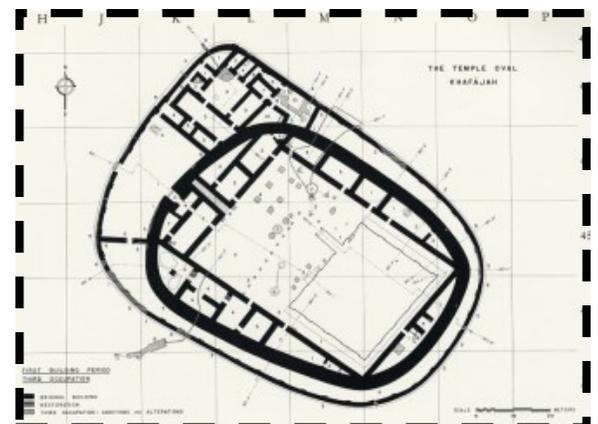
- ⇒ The temple is enclosed by a solid, oval defensive wall, containing a single entrance.
- ⇒ Along the inside of this wall there were storerooms and craftsmen's shops.
- ⇒ It contains the dwelling of the high priest or en.
- ⇒ The Khafaje temple is also known as the Sin Temple, this structure contained private homes as well as the temple for the god Sin.



Khafaje Temple 3000—2500 BCE



(Plan) Khafaje Temple 3000—2500 BCE



# Akkadians

(2350 BCE)

## Mesopotamia (Iraq)

- ⇒ When Northern Iraq conquered southern Iraq, they unified all of Iraq into one empire for the first time.
- ⇒ Akkadians were a fierce people, governed not only by a priestly class but also by a warrior-king.
- ⇒ Many aspects of Sumerian culture were adopted by the Akkadians, however, they retained a king instead of copying the Sumerians' form of city-state leadership.
- ⇒ Overthrown in 2150 BCE by the Guti, a group of tribes from the mountain regions of Iran.
- ⇒ Sometimes artists showed the kings conquering their enemies, or they showed how much the gods loved the kings.
- ⇒ The kings wanted art to

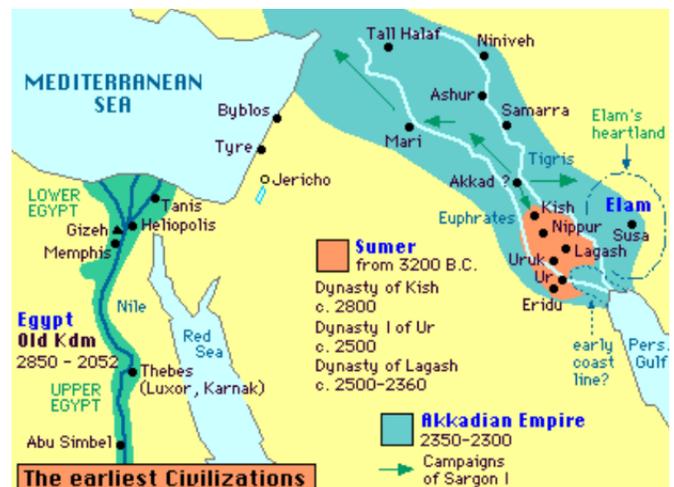
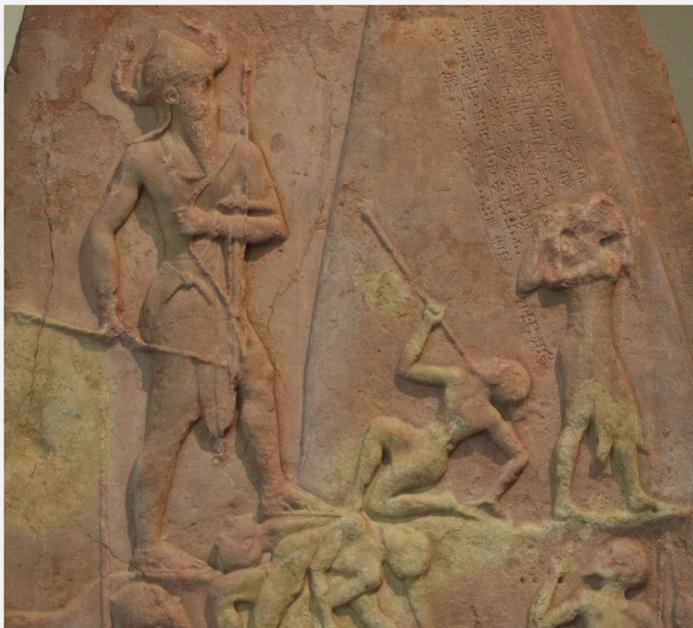


Akkadian ruler 2300 BCE

remind the conquered people how impressive and important the kings were.

- ⇒ Women appear to have been respected and to have played a significant role in the religious cultus.
- ⇒ The Empire was an important bridge in the development of the culture, social organization and commercial practices of the region. The Akkadians worshipped a pantheon of Gods. These were conceived as having human form and their status differed as each was associated with an aspect of nature and controlled the seasons.

Stele of King of Akkad celebrating his victory 2250 BCE



# Neo Sumerian

(2050—1950 BCE)

## Iraq

During the last Sumerian dynasty, the land was divided up into provinces that were each run by a governor. In certain regions, military commanders assumed more power in governing. Each province contained a redistribution center where provincial taxes would all go to be shipped to the capital. Taxes were payable in forms such as crops, livestock and land. The items would then be distributed where needed. Ur III established one of the earliest known law-codes that established the king as the beacon of justice for the land, a role that previous kings normally did not play.

Many large temples and **ziggurats** (to build on a raised area) were built, most of which possessed monumental staircases. The staircases were thought to be used by divinity, for ascending and descending between heaven and Earth.

Neo-Sumerian architecture was mostly based on the materials that were available in that demographic area, and quality materials were not available so the people used tall reeds from marshes and mud-brick elements for housing more permanent residences. Structural designs had three stages, that started as a simple idea that progressed to more advanced designs. Buildings based on these primitive blueprints have been preserved. In later years, old structures were strengthened and buttresses were added.

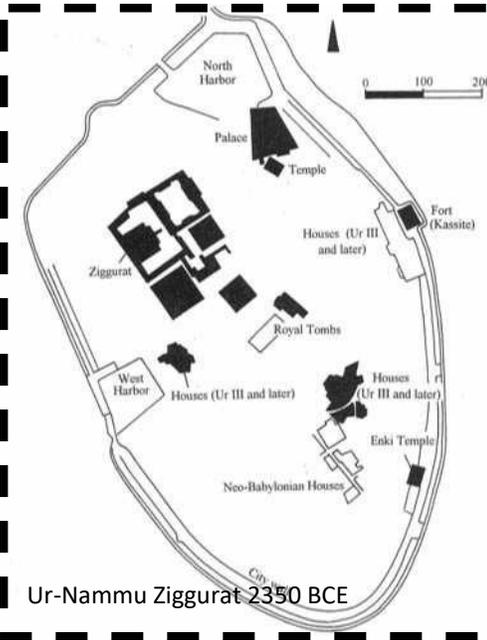


Bulls-head ornament, from soundbox of harp 2685 BCE



# Ur-Nammu Ziggurat

(2350 BCE)

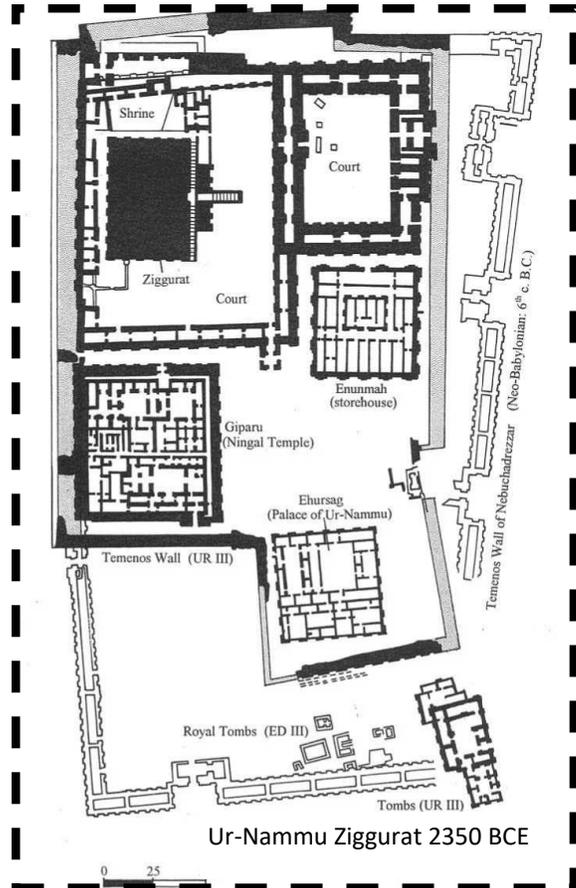


Ur-Nammu Ziggurat 2350 BCE

**Mesopotamia (Iraq), ca. 2100 BCE**

⇒ Commonly constructed of sundried brick bonded with bitumen, reed matting, or rope ziggurats were finished with a weather-resistant exterior layer

⇒ To make their gods feel at home in the lowlands of the river valley, the Sumerians and their successors in Mesopotamia may have aspired to recreate their highland dwelling place.



Ur-Nammu Ziggurat 2350 BCE

of kiln-fired brick.

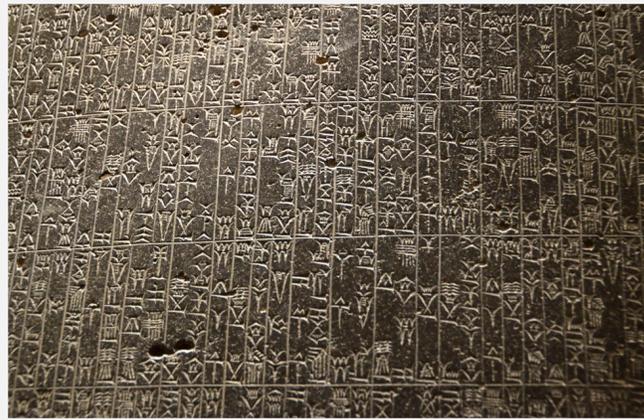
- ⇒ Flight of stairs set in the center of one side connected the temple to the ground
- ⇒ Ziggurats were essentially stepped platforms designed to elevate the temples to the gods so that the latter might descend from the heavens and ensure the prosperity of the community.
- ⇒ Symbolically, the ziggurat may have represented the mountains where the Sumerians came from.

Ur-Nammu Ziggurat 2350 BCE



# Babylonian Period

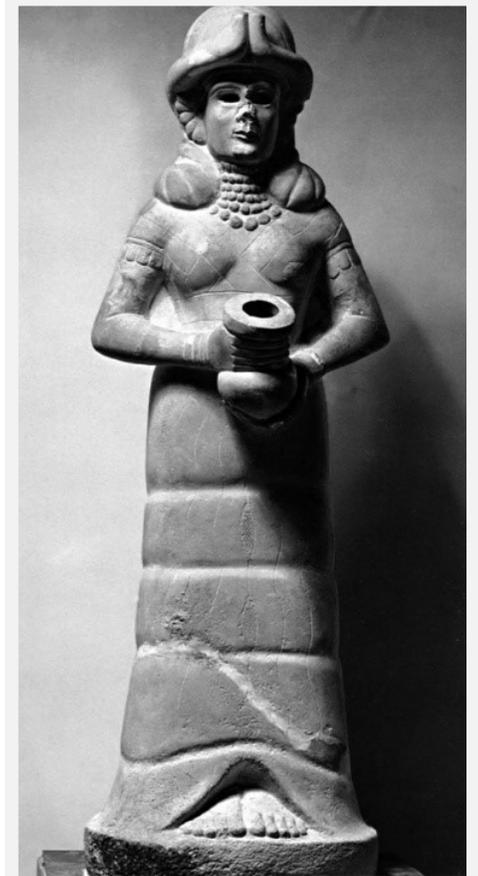
(1792-1750 BCE)



Hammurabi Stele with law code  
1792—1750 BCE

- ⇒ Hammurabi is a well-preserved Babylonian code of law. One of the oldest deciphered writings of significant length.
- ⇒ King Hammurabi enacted the code, and partial copies exist on a seven and a half foot stone **stele**.
- ⇒ Contains scaled punishments as graded depending on social status, of slave versus free man or woman.
- ⇒ Codes deal with matter of contract, wages to be paid, terms of transactions, and issues concerning families.
- ⇒ Anyone who read the laws would know what

Water Goddess With Vase And Water Spouting From The Vase 2125—2025 BCE



## MESOPOTAMIA

One of the most impressive accomplishments during the Babylonian period, is the establishment and distribution of laws.

Hammurabi wanted to bring about the rule of righteousness in the land.

Clearly polytheistic

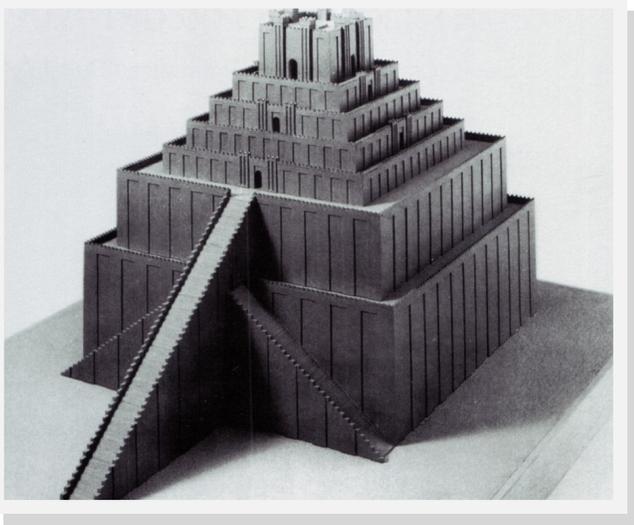
Gods and goddesses reinterpreted as kings and queens

Enuma Elish

Anu—sky god  
Enlil—Major god on Earth  
Ea—god of subterranean fresh water, wisdom, and the arts. Father of Marduk  
Ishtar—goddess of warfare, sex and procreation  
Great Goddess  
God of Nature  
Gods of netherworld

Babylonian creation myth 1800BCE  
Went on high  
Marduk  
Apsu  
Tiamaat  
Anu  
Enki  
Kingu

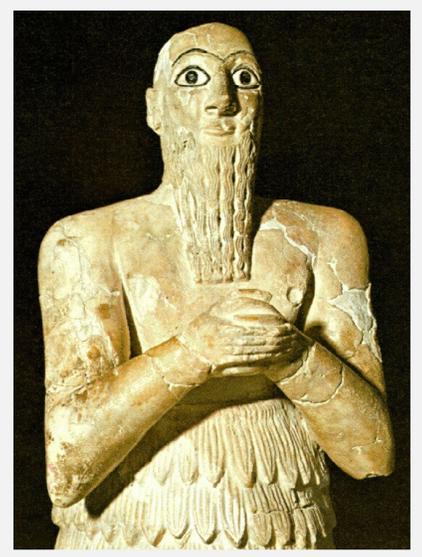
Temple of Marduk 1728



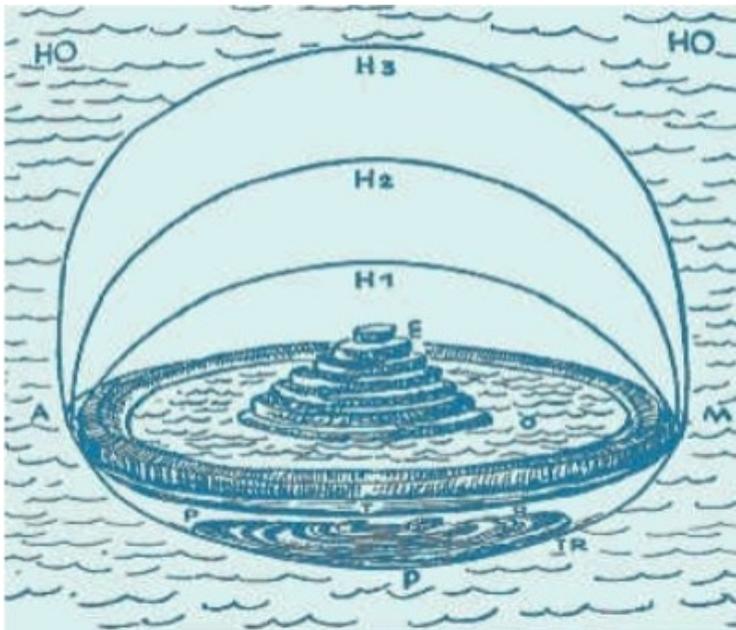
was required of them.

- ⇒ One of the earliest examples of the idea of presumption of innocence, and it also suggested that both the accused and accuser have the opportunity to provide evidence.
- ⇒ The magnitude of criminal penalties often was based on the identity and gender of both the person committing the crime and the victim.
- ⇒ The code issues justice following the three classes of Babylonian society, property owners, freed men, and slaves.

⇒ King Hammurabi restored the Akkadian tradition of central government leading diverse city-states.



(Statuette Iku-Shamagan, King of



Temple of Marduk 1728

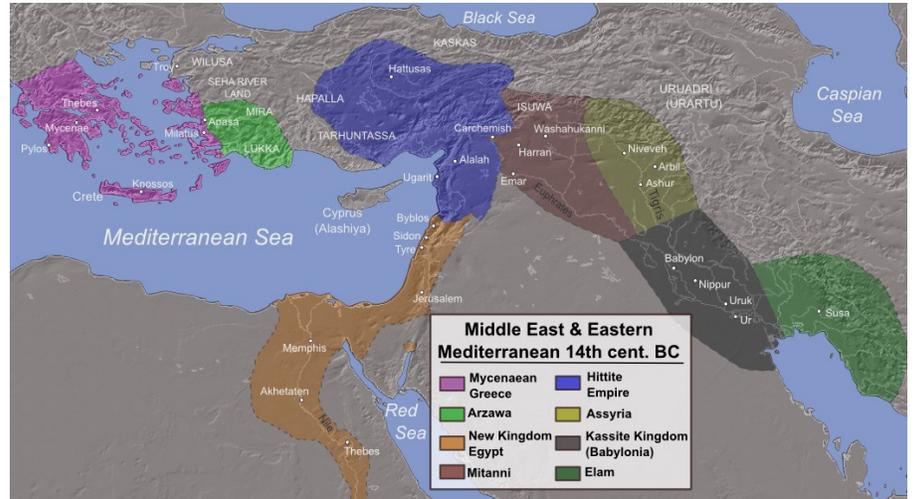


# Kassite

(1600 BCE)

## Iraq

- ⇒ The Kassites were members of a small military aristocracy but were efficient rulers.
- ⇒ No inscription or document in the Kassite language has been preserved, it suggests a severe regression of literacy in official circles.
- ⇒ A territorial state, rather than a network of allied or combative city states, made Babylonia an international power.
- ⇒ The Kassite kings maintained control of their realm through a network of provinces administered by governors.



ans, a fierce people of northern Mesopotamia, an opportunity to gain a foothold in the fertile plains to the south.

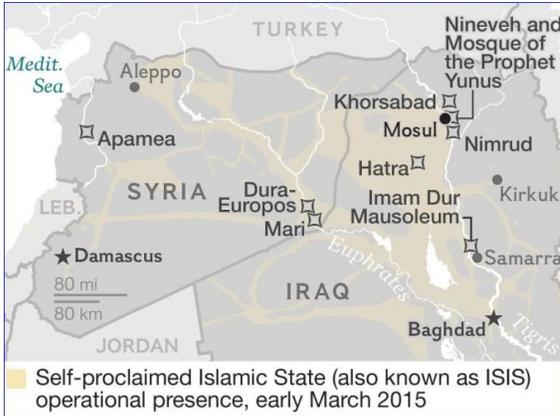
Facade of the Inanna Temple built by the Kassite ruler Kara-indash, Uruk 1415 BCE



- ⇒ The weakness of Kassite rulers gave the Assyri-

# Khorsbad

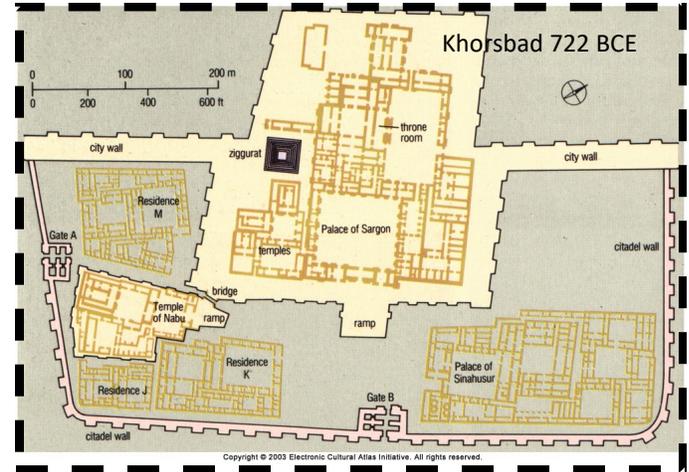
(722 BCE)



The Fortress of Sargon a massive wall of mud brick, 14 meters thick and 12 meters high, surrounds the rectangular site of the city, which covers nearly 300 hectares. The wall has seven gates, each dedicated to an Assyrian god. Extensive cuneiform records detail the building of the site, showing how

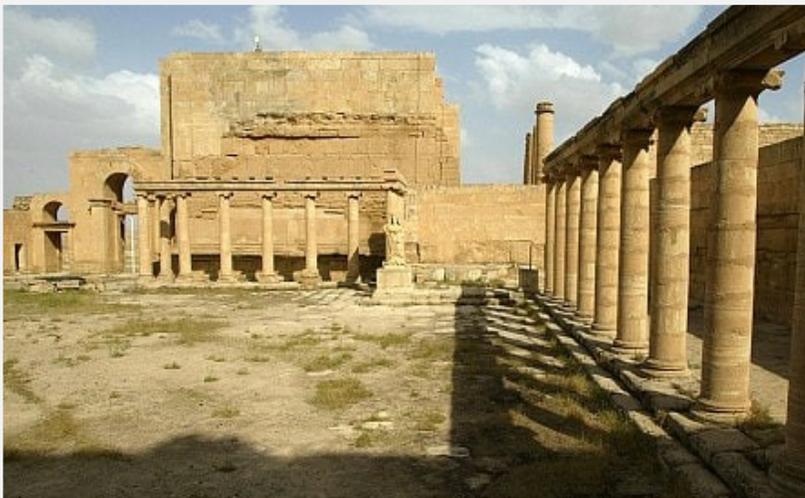
closely Sargon was involved in the planning and design.

The palace and administrative complex contained



over 200 rooms, grouped around three courtyards. The portals were guarded by colossal stone guardian figures, human-headed winged bulls, and the palaces were lined with limestone relief slabs showing scenes of battle and court life (for example, grooms leading horses).

Khorsbad 722 BCE



over 200 rooms, grouped around three courtyards. The portals were guarded by colossal stone guardian figures, human-headed winged bulls, and the palaces were lined with limestone relief slabs showing scenes of battle and court life (for example, grooms leading horses).

Human-headed winged bulls gate Khorsbad 721—706 BCE



In art, lamassu were depicted as hybrids, with bodies of either winged bulls or lions and heads of human males. Assyrian sculpture typically placed prominent pairs of lamassu at entrances in palaces, facing the street and also internal courtyards. They were "double-aspect" figures on corners, in high relief. From the front they appear to stand, and from the side, walk, and in earlier versions have five legs, as is apparent when viewed **obliquely**.

# Assyrian Periods

(1350—1000 BCE)



Hero overpowering a lion  
721 BCE

⇒ Sculptures were typically big, and depicted animals or anthropomorphic figures

The Assyrians treated the conquered people they relocated well and considered them Assyrians once they had submitted to central authority. There was no concept of a 'master race' in Assyrian policies; everyone was considered an asset to the empire whether they were born Assyrian or were assimilated into the culture.

This unity of vision of a supreme deity helped to further unify the regions of the empire. The different gods of the conquered peoples, and their various religious practices, became absorbed into the worship of Ashur, who was recognized as the one true god who had been called different names by different people in the past but who now could be properly worshipped as the universal deity



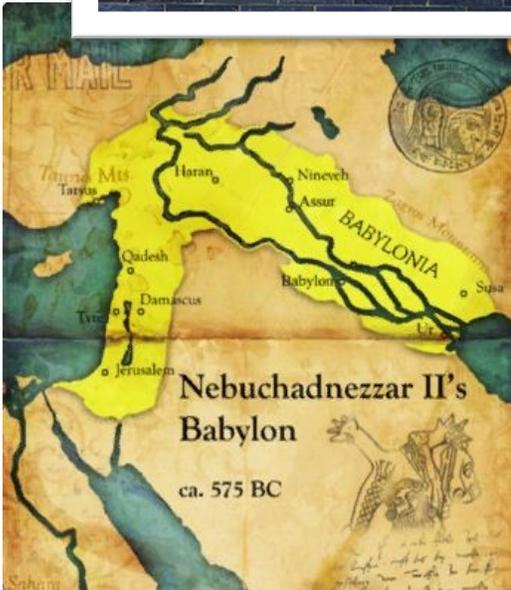
Men transporting cedarwood for construction of a palace by sea. Bas-relief 721—705 BCE

Goat Bearer relief 721—705 BCE



# Nebuchadnezzar II

(600—536 BCE)



Throne Room Building of Nebuchadnezzar 600—536 BCE) Striding Lion, a wall relief made from polychrome glazed, fired bricks, is one of the most iconic objects in the Palace of Nebuchadnezzar II.

Striding Lion is one of many such reliefs that decorated the walls of the palace's ceremonial hall and very similar to the lions that line the processional way from the Ishtar Gate to the temple of Marduk.

Lions were symbolic of royalty because of their strength, and fighting a

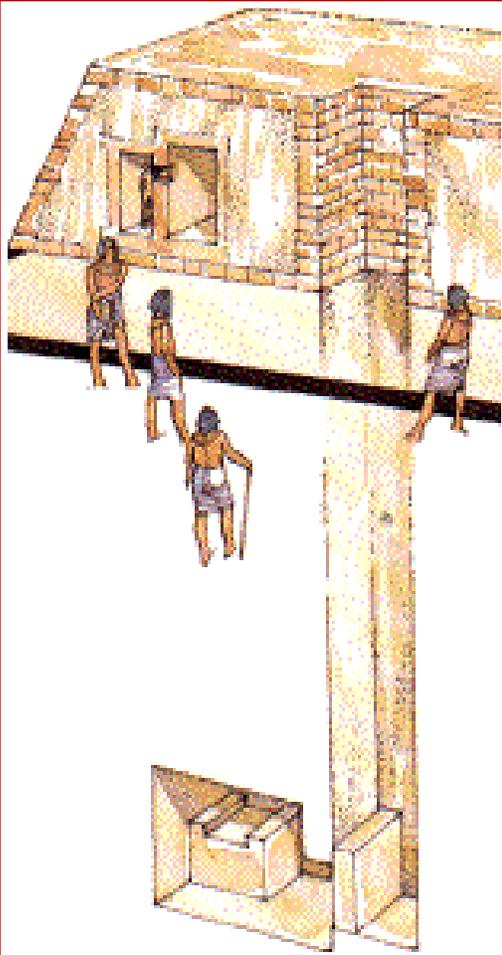
Striding Lion, a wall relief 605—

lion gave a king great prestige.



# Archaic Period

(2950—2650 BCE)



Mastaba tombs 3000 BCE

## EGYPT

Preservation of the physical body after death was of great importance as was the provision of household furnishings, surrogate servants, food, drink and a suitable permanent chamber

Ka: Life-force

Ba—Physical manifestation

Akh—Spirit

## Egypt

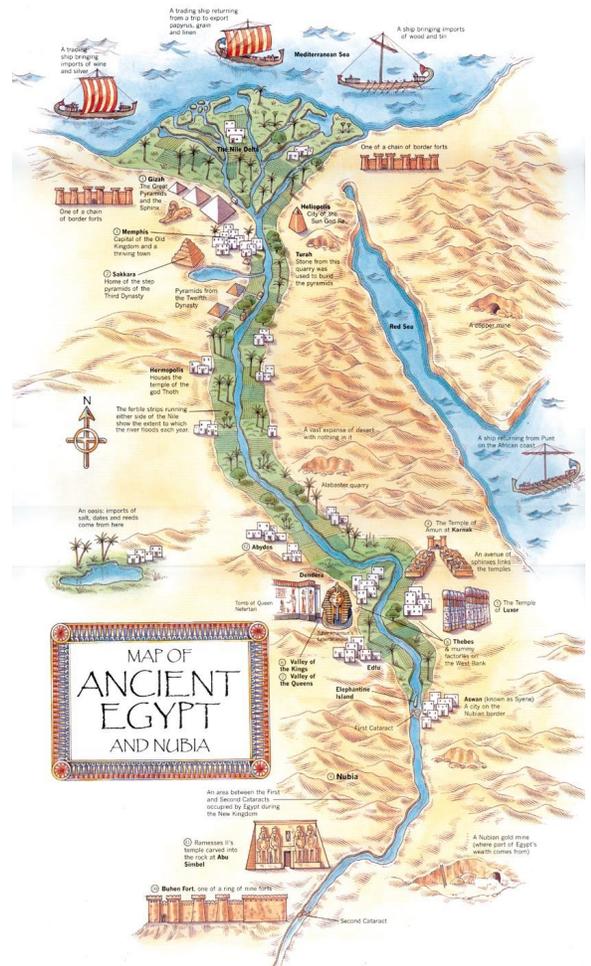
The history of Egypt begins in about 3000 BCE with the union of Upper and Lower Egypt by Menes, the pharaoh king of Upper Egypt. Menes was a temporal ruler and a manifestation of the falcon-headed god Horus, the god of pharaohs.

⇒ When the pharaoh died, he became identified with Osiris, father of Horus and lord of the underworld, and his successor as pharaoh assumed the Horus role.

⇒ Egyptian theology linked both Osiris and Horus with the sun god Ra

⇒ Egyptians focused on the transition from the world of the living to that of the dead.

Egyptians believed strongly in the afterlife. Their religion taught that earthly existence was followed by an afterlife in which the life-force was reunited with the physical manifestation to become a spirit.



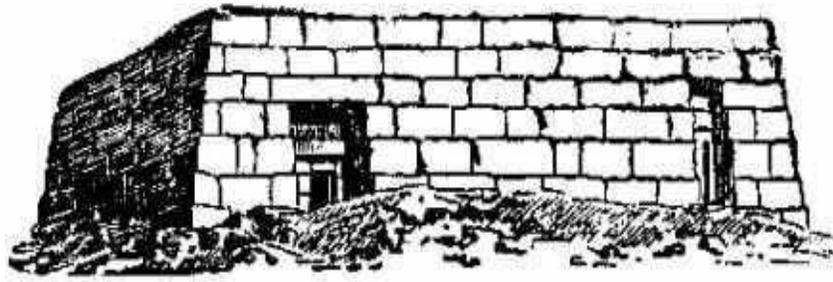
### Upper Egypt

- ◇ Farmers shared the land—always lived in tents. Bury bodies under sand mounds to the east
- ◇ Body of kings were distributed here

### Lower Egypt

- ◇ Make Palace tombs—land is always wet. More stable agriculture. Don't add items to the bodies.
- ◇ Organs of kings were distributed here.

Mastab tomb 3000 BCE



Elaborate rituals were developed inside tomb chambers to ensure that the transformation from life to death was successful.

Tombs, rather than temples or palaces, became the most lasting religious structures.

**Mastabs**, the earliest tombs, were built as eternal houses for the departed and resembled the dwellings of the living.

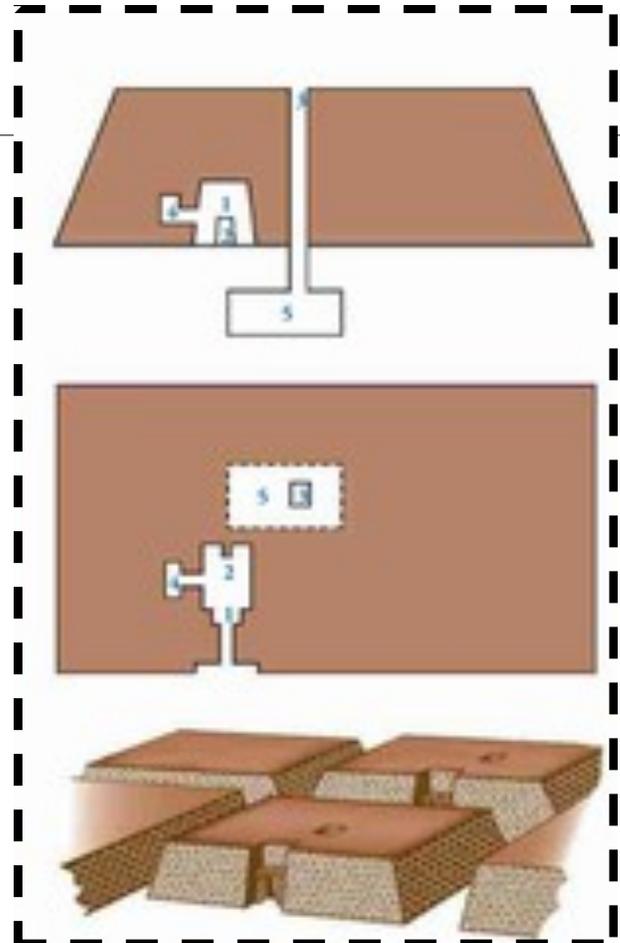
The basic mastab was a block like structure above ground containing a small room for offerings and another chamber for the body and a statue of the deceased.

Hierakonpolis, Upper Egypt 3500 BCE



The items entombed with the dead soon attracted thieves, so the tombs were revised of the design and added a deep shaft under the building. The body was placed at the base and the shaft was then filled with stone and rubble to deter robbers.

Mastab tomb 3000 BCE



# Old Kingdom

(2686—2181 BCE)

## Egypt

As the religious rit by the priesthood hance the significa pharaoh, the mast wise enlarged to fo mid.

⇒ At death the ph accompanied the his daily journe sky, and he wou need to be lifte in his eternal ho

⇒ The shape mak bolic reference nual rebirth of as floods reced signs of plant li

⇒ The pyramid's f sented both da yearly rebirth tl out eternity.

Originally, howeve Egyptians believed

only the pharaoh had a **ba**, and only he could become one with the gods; dead commoners passed into a dark, bleak realm that represented the opposite of life. The nobles received tombs and the re-



Djoser, seated in a throne, in a painted limestone statue 2600

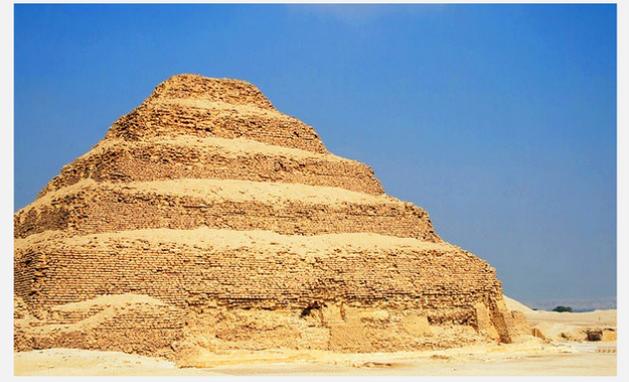
upkeep as gifts from the king. the deceased pharaoh was be- end to the sky and dwell among er the course of the Old King- er, he came to be more closely d with the daily rebirth of the ta and with the underworld rul- as those deities grew more im-



# Djoser's Funerary Complex

(2630 BCE)

Designed by Imhotep, the pyramid for Djoser is Egypt's first monumental construction in stone. Djoser's stepped pyramid, rises 197 feet above its 397 x 358 foot base. The pyramid began as a Mastaba, it was built up in several stages to attain its shape.



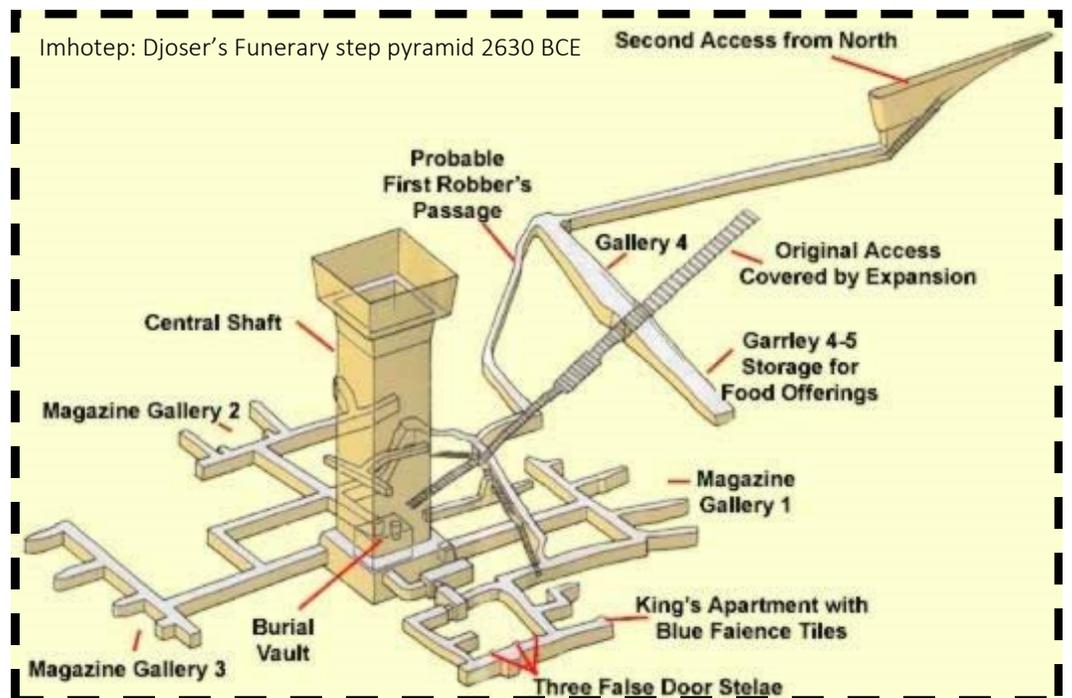
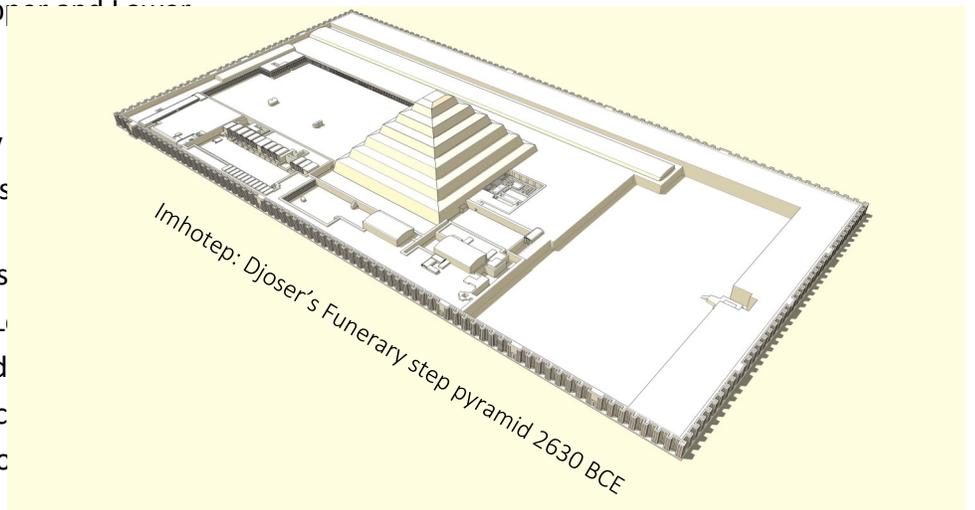
Imhotep: Djoser's Funerary step pyramid 2630 BCE

The exterior of the pyramid was faced with dressed limestone.

The complex includes areas for the practice of rituals with symbols of the bond between Upper and Lower Egypt.

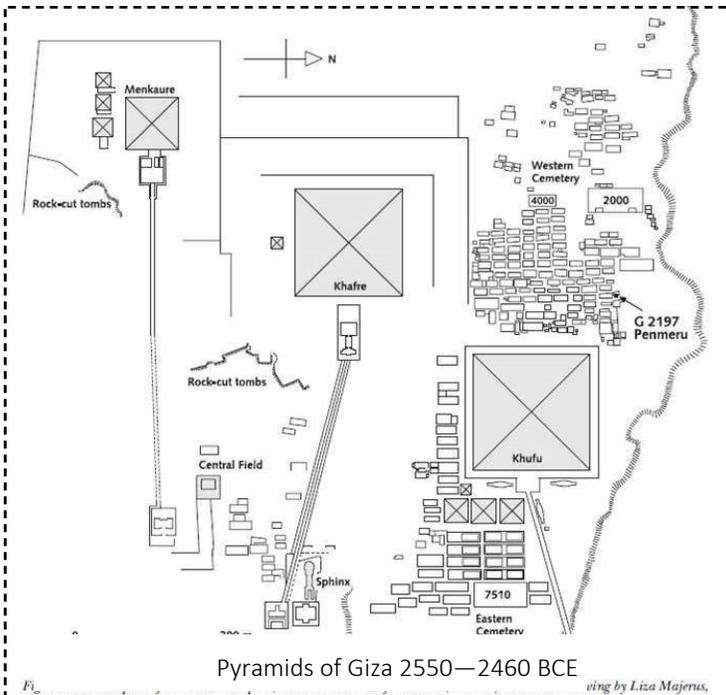
The Heb-Sed race was run annually by the pharaoh to ensure fertility of the fields.

Djoser had two burying chambers to show his power and paternity over Upper and Lower Egypt. The first chamber located beneath the pyramid held the mummy in an alabaster coffin. The second chamber, located on the south side of the perimeter wall, contained the embalmed internal organs.



# Pyramids at Giza

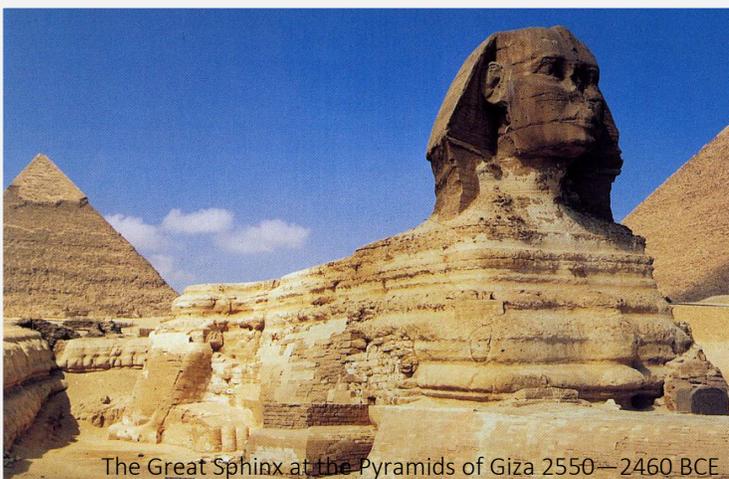
(2550—2460 BCE)



## Egypt

- ⇒ The largest pyramid is of king Khufu and was built first. It was planned from the start to be a true pyramid of unprecedented proportions.
- ⇒ Khufu's pyramid is not solid. Three burial chambers are built within it.
- ⇒ The lowest chamber is thought to represent the underworld. The middle chamber (Queen's chamber) would contain a over-life-sized statue of Khafre and served as his spirit chamber so that he would not wander around in search for his body.
- ⇒ The top chamber is where Khufu was buried.

The last period constructed, and smaller of the three belonged to Menkaure, the son of Khafre. The tomb was constructed in haste and was not finished before his death



The second largest pyramid was that of Khafre, the son of Khufu, though it is at a higher elevation, so it has the illusion to be taller. The Pyramid faces a sphinx, a man-headed lion 187 feet long and 66 feet high carved in situ out of a natural rock ledge.

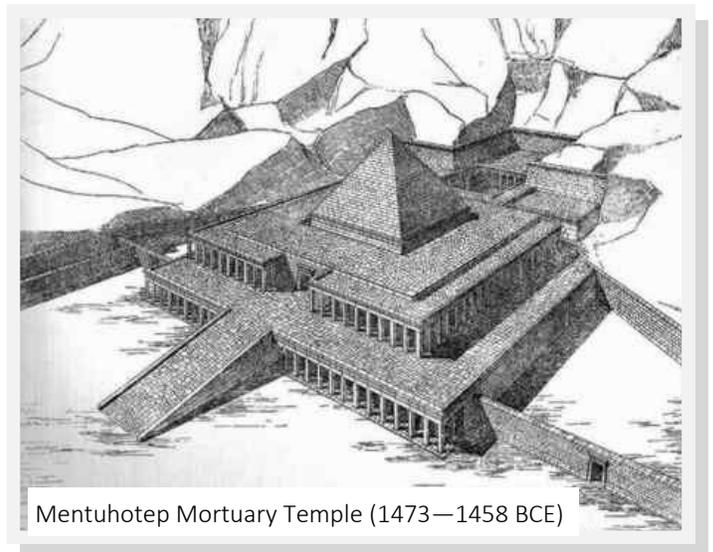
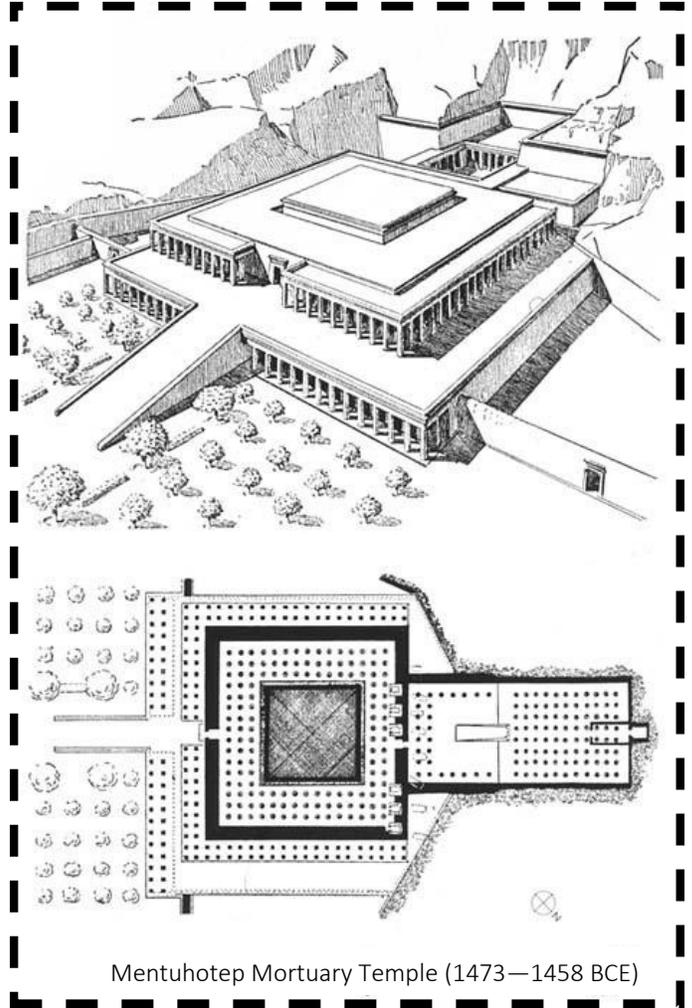
# Middle Kingdom

(2040—1785 BCE)

## Egypt

During the Middle Kingdom, the capital was relocated from Memphis to Thebes, and the pharaoh's position was more that of a feudal lord over local vassals than an absolute and divine ruler in the Old-Kingdom tradition. Royal tombs were still of major architectural importance.

Although the king was again the ruler of all Egypt, subordinate officials often lived and acted like small kings and there was an ease in upward mobility in the society which had not existed before.



# New Kingdom

(1554—1080 BCE)



## Egypt

The first of the new Kingdoms was the eighteenth dynasty that continued the tradition of burial in rock-cut tombs. Spiritual nourishment for the deceased was provided at increasingly elaborate separately erected funerary temples.

Temple complexes to honor both gods and pharaohs became more extensive and elaborate, aided by the establishment of Amun as the main “state” god and the increased power and influence of his priesthood.

Thebes remained a cultural and religious center. The pharaohs built their mortuary temples here and were buried in huge rock-cut tombs decorated with finely executed paintings.

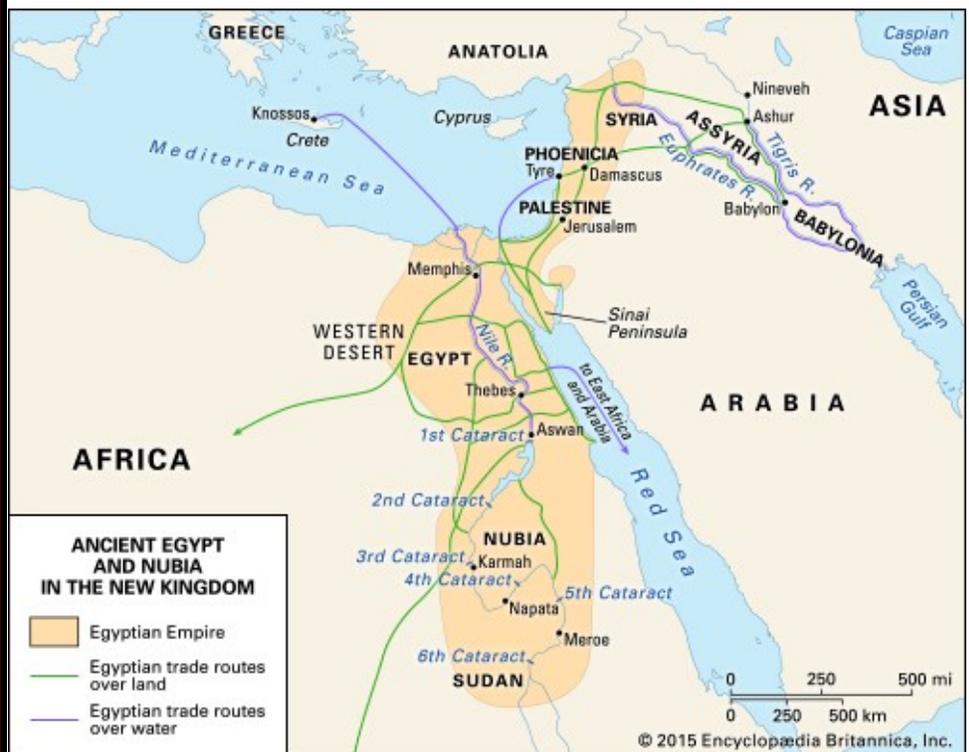


Head of Ahmose 1550 BCE

## EGYPT

It was well known that tombs had been looted by grave-robbers. To preserve the worldly remains of the pharaoh and thwart the thieves, builders relied on concealment and improved policing of the royal necropolis.

Pharaohs were interred secretly in the desert wilderness beyond the valley of the Kings. Their modest chambers were hidden by dirt and sand.



# Queen Hatshepsut Mortuary Temple

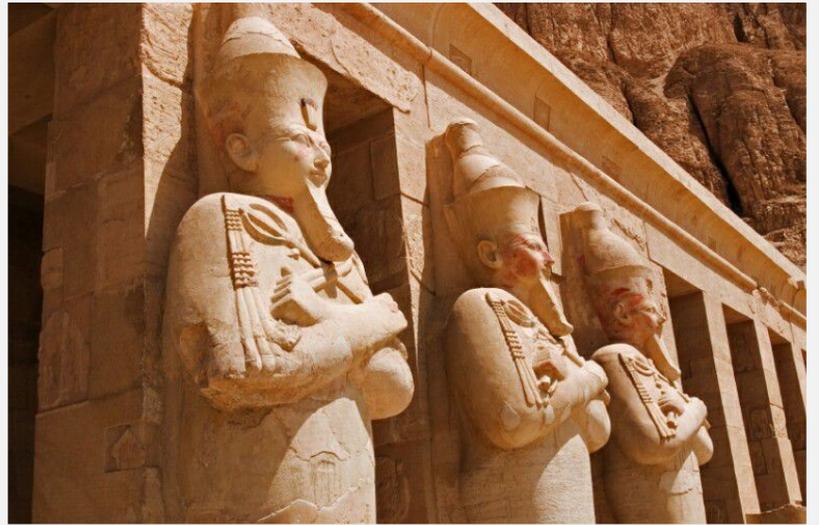
(1473-1458 BCE)

## Dier-el-Bahari, Egypt,

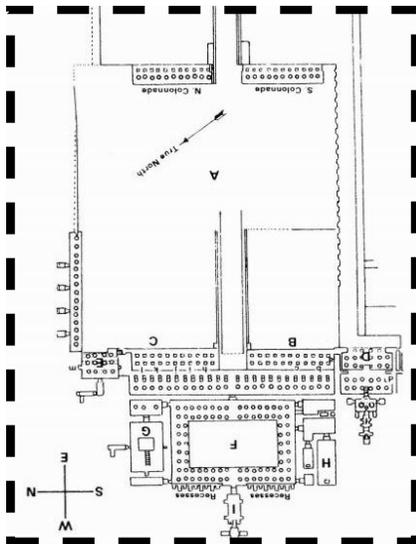
Succession to the throne passed through the female line, but the pharaoh was almost always male.

After the death of her husband (and half-brother) Pharaoh Thutmose II, she ruled independently. The temple complex was a mortuary chapel dedicated to the god Amun, the sun god with whom the pharaoh was associated.

⇒ Buried irrigation pipes supplied water to sustain the plants

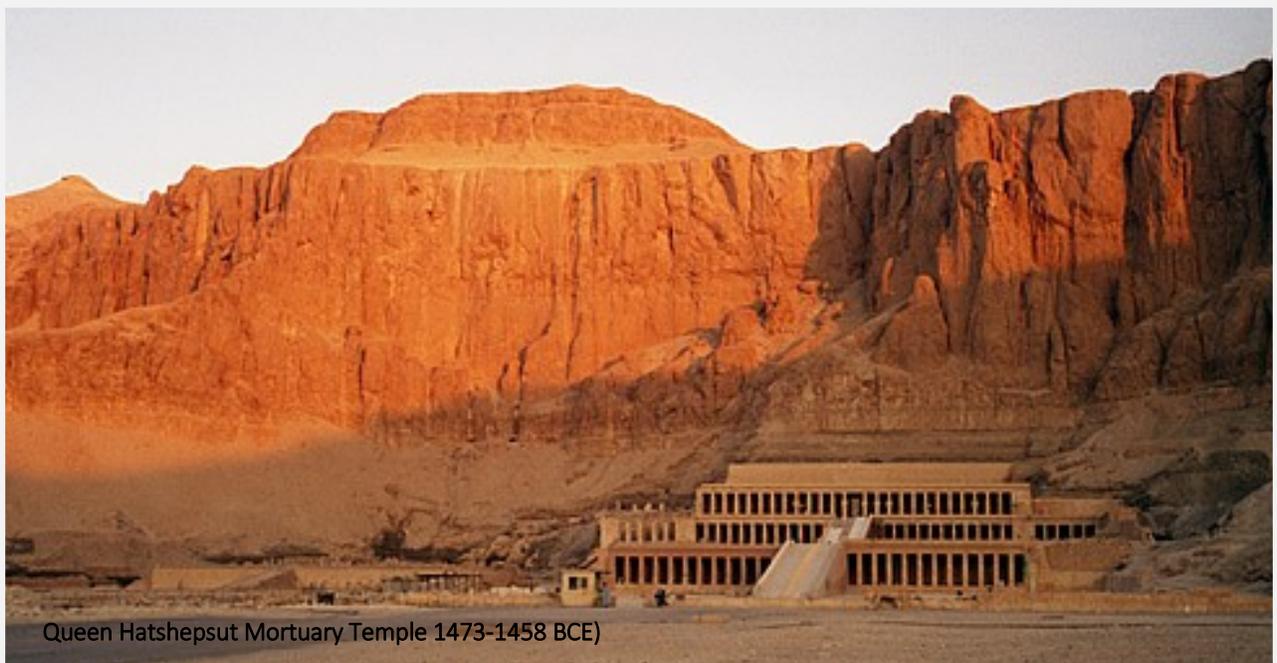


Queen Hatshepsut Mortuary Temple 1473-1458 BCE)



Her successor did everything possible to eradicate her memory, erasing her name from inscriptions, smashing almost all of her sculptural representations, and desecrating the burial site of Senmut.

To thwart thieves, pharaohs arranged for their bodies to be buried in concealed tombs in the Valley of the Kings (behind the cliffs), where priests guarded against robbers.



Queen Hatshepsut Mortuary Temple 1473-1458 BCE)

# Temple of Amon-Ra at Karnak

(1550 BCE)

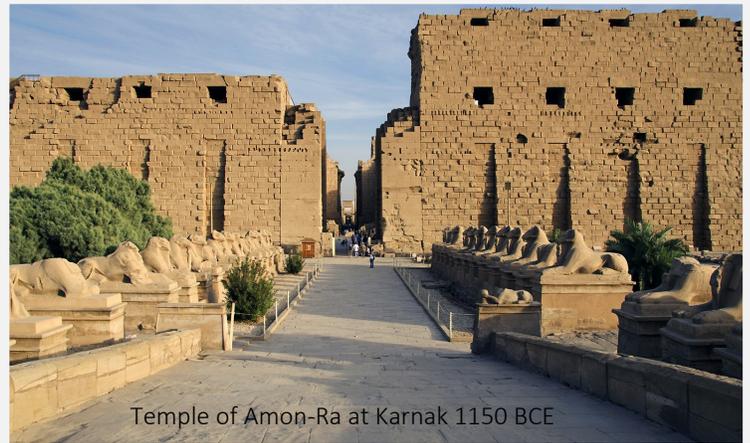
## Egypt

Begun about 1550 BCE, it was enlarged by Thutmose I, enriched by **obelisks** given by his daughter, Hatshepsut, and again expanded with a hypostyle jubilee festival hall constructed by Thutmose II for his own glorification. Yet another **hypostyle hall**, the largest of all, was built by Ramesses II.

⇒ Temple complexes built to honor both gods and pharaohs became more extensive and elaborate,

aided by the establishment of Amun as the main “state” god and the increased power and influence of his priesthood.

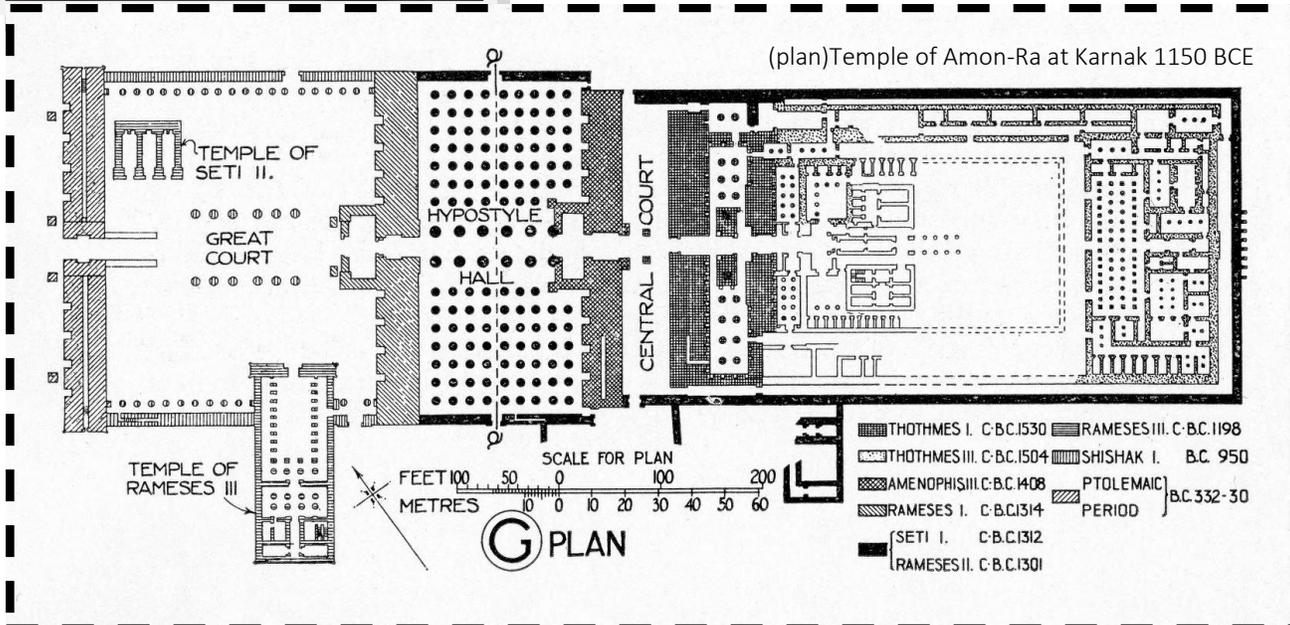
⇒ Successive rulers would add new portions or renovate older temples, creating designs whose chief attribute was overbearing grandeur, not coherence or esthetic delight.



Temple of Amon-Ra at Karnak 1150 BCE



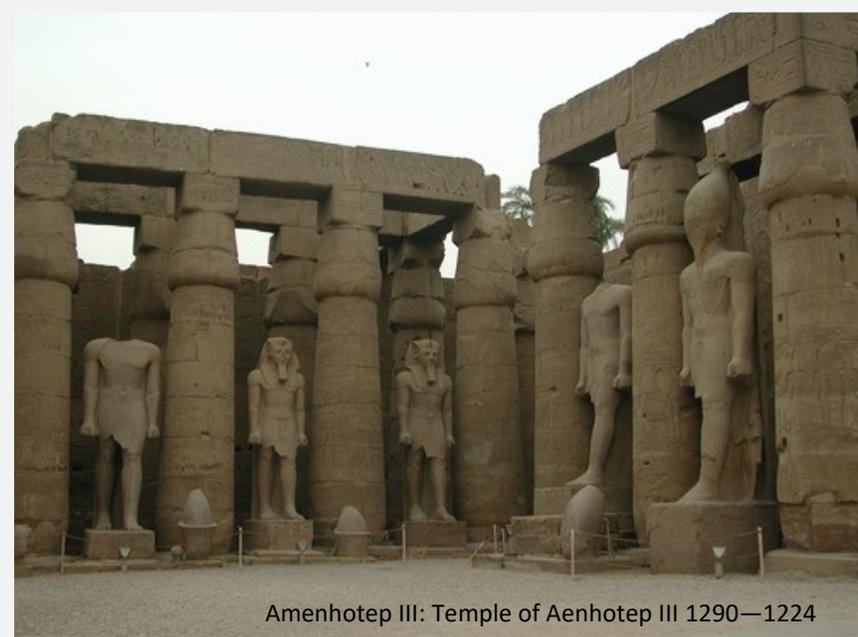
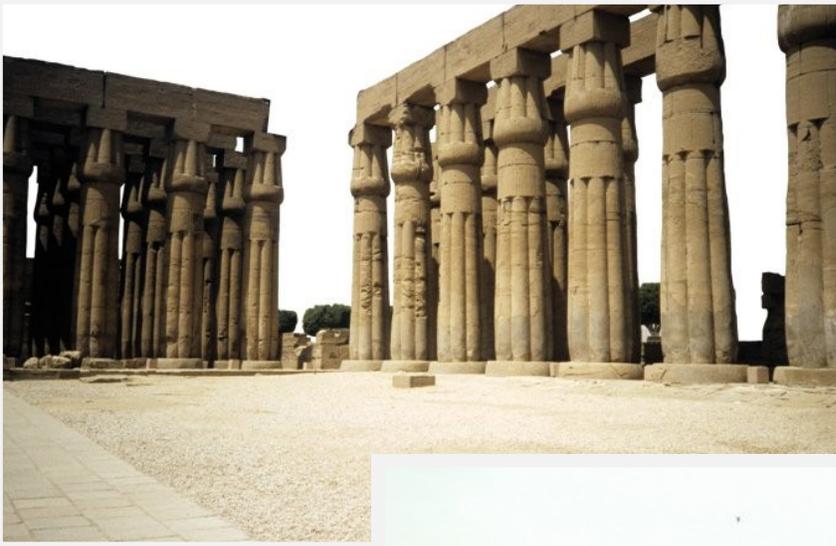
Temple of Amon-Ra at Karnak 1150 BCE



# Temple of Aenhotep III at Luxor

(1290—1224)

Amenhotep III: Temple of Aenhotep III 1290—1224



Amenhotep III: Temple of Aenhotep III 1290—1224

## Egypt

Amenhotep II was built by Amenhotep during the 18th Dynasty. The mortuary Temple Amenhotep III was the largest funerary complex in Thebes that was built.

The Temple faced east to the rising sun, since Amenhotep III revered the sun god Amun-Re.

At the front of the mortuary temple, the Colossi of Memnon can be found and as one enters, the long Hypostyle Hall leads to the Peristyle Sun Court and the whole area is surrounded by three pylons known as gates.

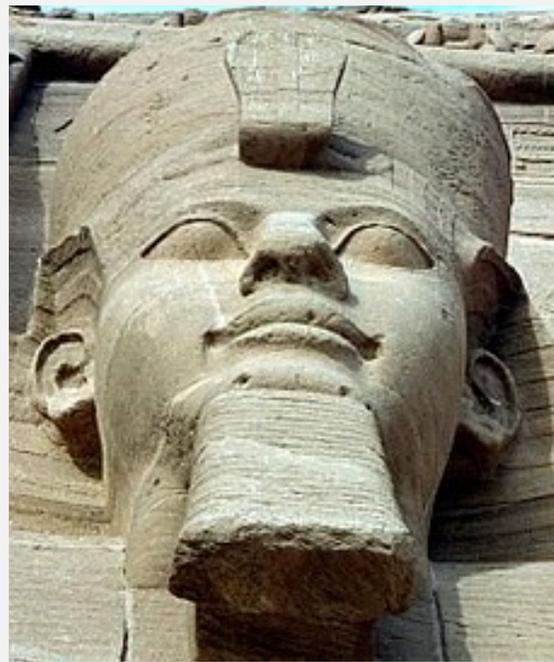
The sun court is divided into the North and South halves and consisted of statues of both Amenhotep III and the gods. The north side had statues made of brown quartzite from Lower Egypt, while the South side had red granite from Aswan in upper Egypt.

There are hundreds of freestanding statues, sphinxes, and massive stelae throughout the mortuary temple

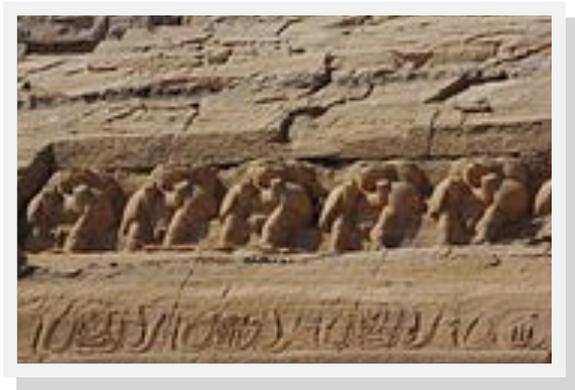
# Rock Cut Temple of Ramesses II

(1264—1244 BCE)

- ⇒ The Rock Cut Temple of Ramesses II was one of six rock temples erected in Nubia during the long reign of Ramesses II.
- ⇒ Their purpose was to impress Egypt's southern neighbours, and also to reinforce the status of Egyptian religion in the region.
- ⇒ It was dedicated to the gods Amun, Ra-Horakhty, and Ptah, as well as to the deified Rameses himself.



Rock Cut Temple of Ramesses II 1264—1244 BCE



Baboon carvin above the heads of the statues of Ramesses 1264—1244 BCE



Rock Cut Temple of Ramesses II 1264—1244 BCE

# The Late Period

(712—332 BCE)

## Temple of Hathor at Dendra

(330—30 BCE)

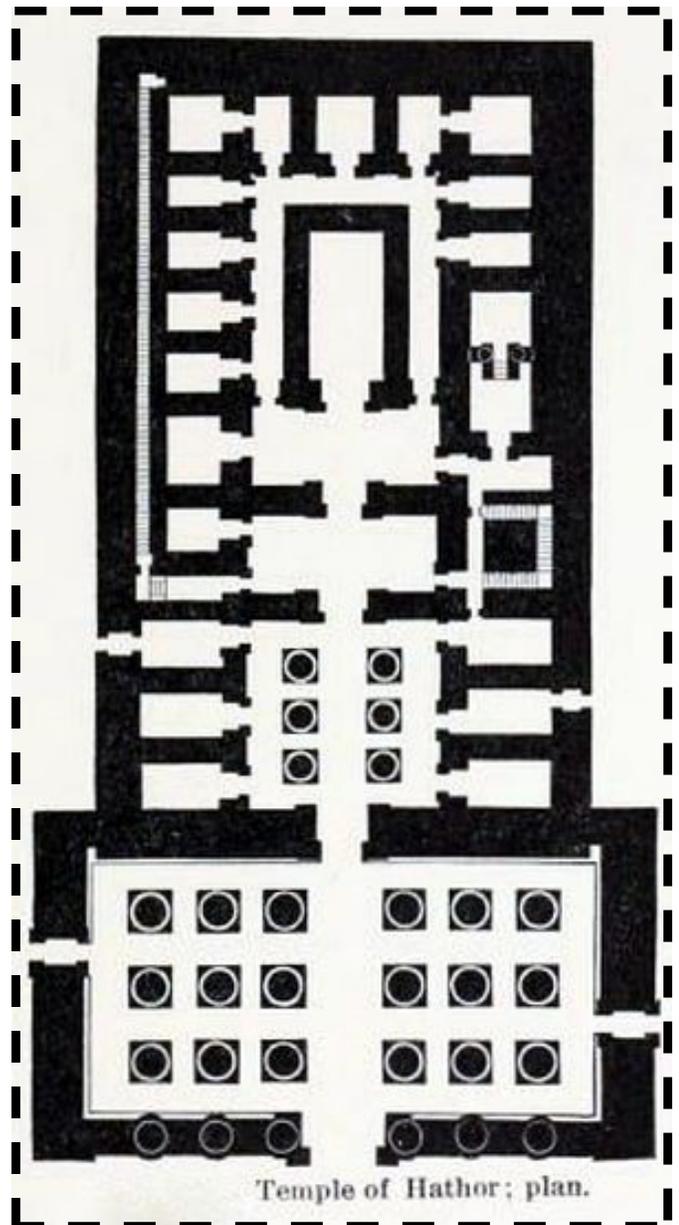
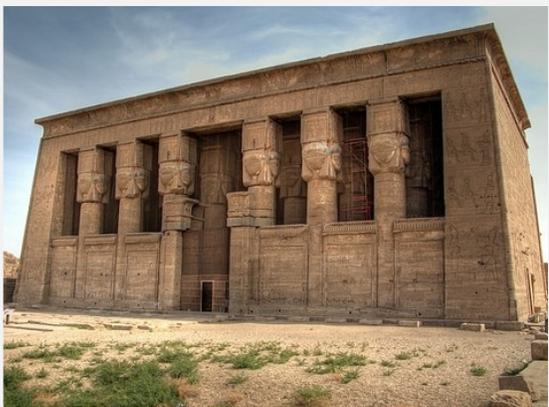
### Egypt

Hathor was the goddess of love, joy, and beauty.

With the exception of its supporting pillars, which had capitals sculpted in the image of Hathor

The Dendera necropolis is a series of mastabat tombs. The subterranean Hathor temple tombs total 12 chambers.

An opening in the "Flame Room" floor leads to a narrow chamber with representations on the walls of the objects which were kept in them. In the second chamber, a relief depicts Pepi I. He offers a statuette of the god Ihy to four images of Hathor.





Snake goddess Knossos 1550—1450 BCE

## GREECE

The absence of fortifications in the settlements suggests a relatively peaceful co-existence between the different communities. However, the presence of weapons such as swords, daggers and arrow-heads and defensive equipment such as armor and helmets would also suggest that peace may not always have been enjoyed.

# Minoan

(3000 –1380 BCE)

## Crete

The later Greeks created legends associated with King Minos and his palace and labyrinth at Knossos, where the fearsome Minotaur that ate youths and maidens lived.

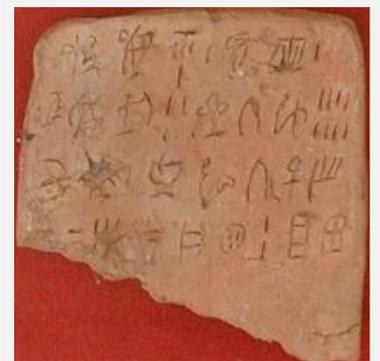
The complexity of these palaces, the sport of bull-leaping, the worship of bulls as indicated by the presence throughout of sacred bulls' horns and depictions of double axes (or labrys) in stone and fresco may all have

combined to give birth to the legend of Theseus and the labyrinth-dwelling Minotaur so popular in classical Greek mythology.

Linear A was the primary script used in palace and religious writings of the Minoan civilization and mainly produces unintelligible words



bull-leaping fresco from the Knossos 1550—1450 BCE



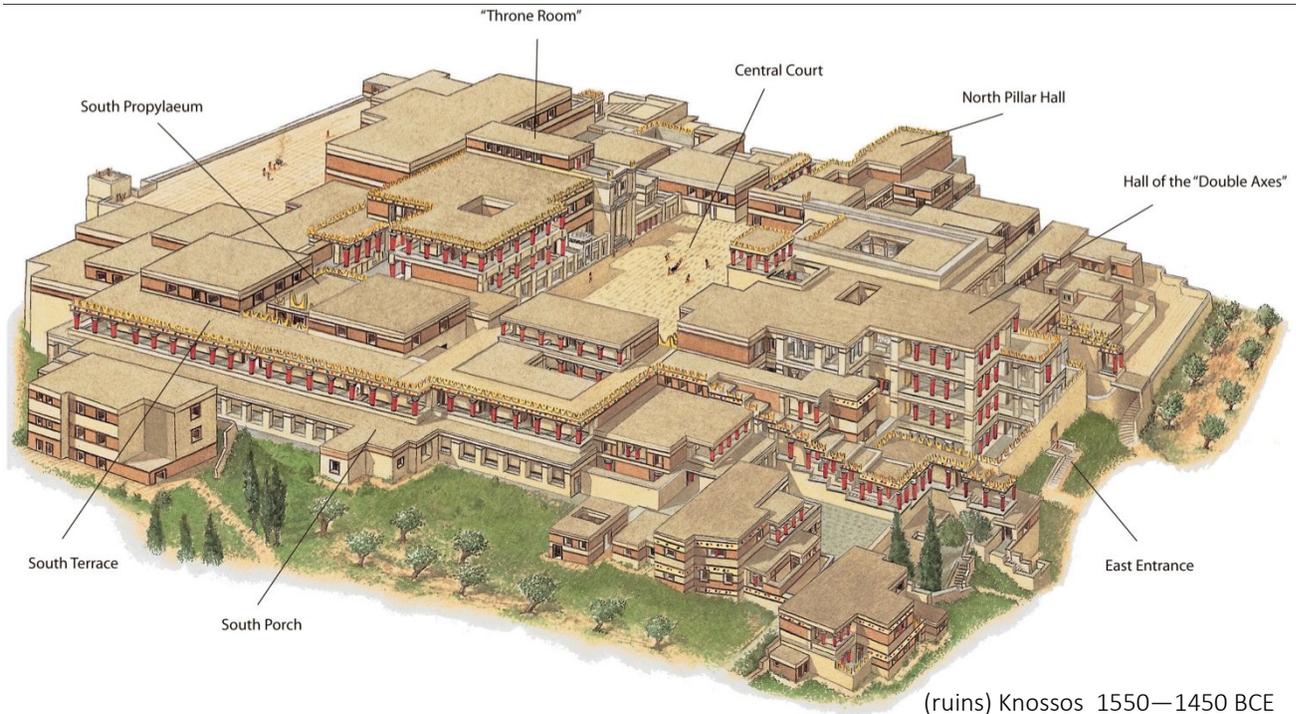
Linear A tablet from the palace of Zakros, 3000—1380 BCE

Dolphin fresco from the Knossos 1550—1450 BCE



# Knossos

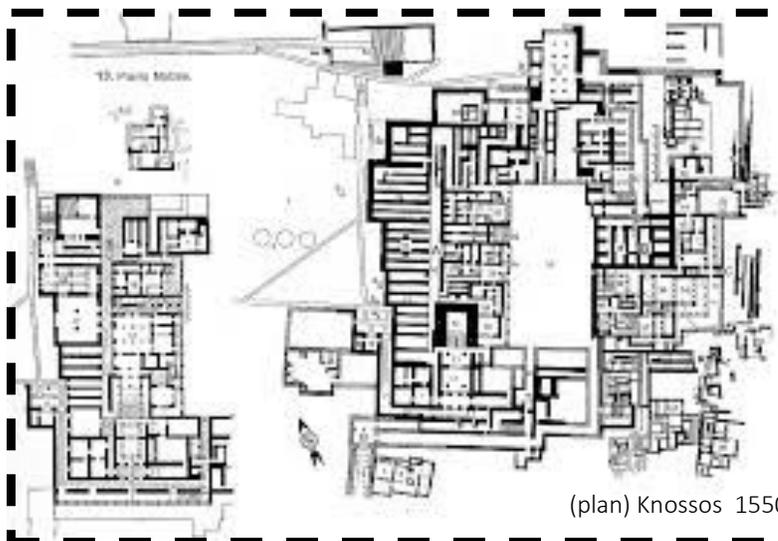
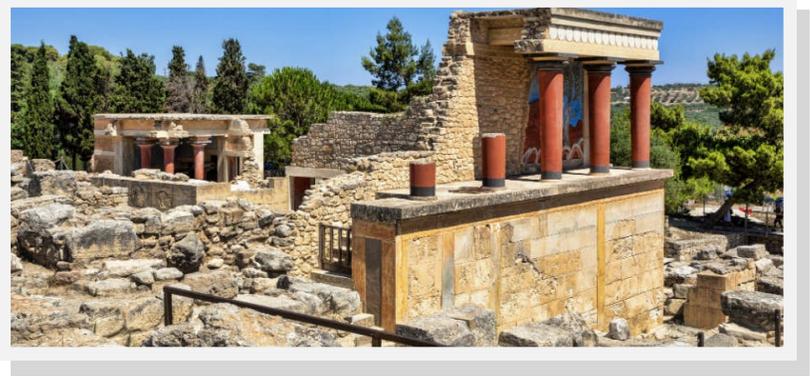
(1550—1450 BCE)



(ruins) Knossos 1550—1450 BCE

The complex had ritual or ceremonial rooms, storage areas, and staircases built around light wells, open cores that admit sunlight to the lower levels. The courtyard continued as the central element in the composition. There are tablets scribed in Linear A.

The function of the building may have changed from temple to palace in its final years. Buildings on the eastern side of the courtyard have been interpreted as being residential, although some of the suites may have functioned as textile workshops and others were definitely used as storage areas. Rooms on the east had views out over the valley below.



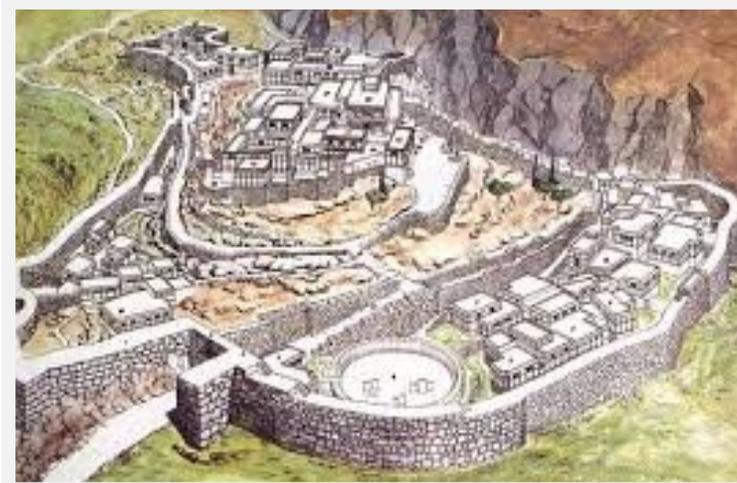
(plan) Knossos 1550—1450 BCE

The primary entrance to this section was through a grand staircase approached from the middle side of the central court and illuminated by an open light well. The naturalistic portrayal of the young men and women in the frescoes create the impression that the Minoans were an energetic and cheerful people who took delight in their own beauty and that of the natural world.



# Mycenaean

(1600—100 BCE)



(reconstruction) Mycenae 1600—1250 BCE

⇒ **Greece**

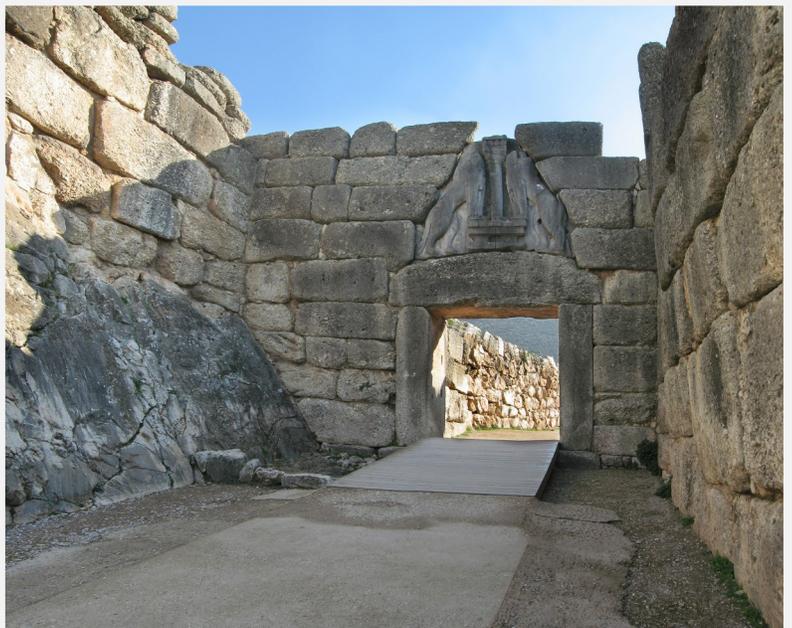
⇒ Graves from this period preserve a large number of golden objects as well as weapons.

⇒ The citadel at Mycenae was built with a strong concern for defense.

⇒ The city is on high ground, protected by mountains on the north and south and flanked by two ravines, allowing surveillance of a wide area down to the coast.

- ⇒ Fortifications then expanded to enclose the palace compound to twenty-four feet thick and up to forty feet high. Constructed of boulders set in position with minimal shaping and no mortar, except for the sections immediately adjacent to the gates where the stone had been cut into large blocks.
- ⇒ The entrance to Mycenae was through the Lion gate, which was positioned so that the approaching visitor had to pass along an increasingly narrow passageway parallel to the enclosing wall, allowing defenders inside the settlement ample opportunity to attack hostile forces before they could reach the entrance.
- ⇒ Burial type: the shaft grave became the most common form of elite burial, a feature that gave the name to the early period of Mycenaean Greece
- ⇒ Among the Mycenaean elite, deceased men were usually laid to rest in gold masks and funerary armor, and women in gold crowns and clothes gleaming with gold ornaments.

Lion's Gate Mycenae 1600—1250 BCE



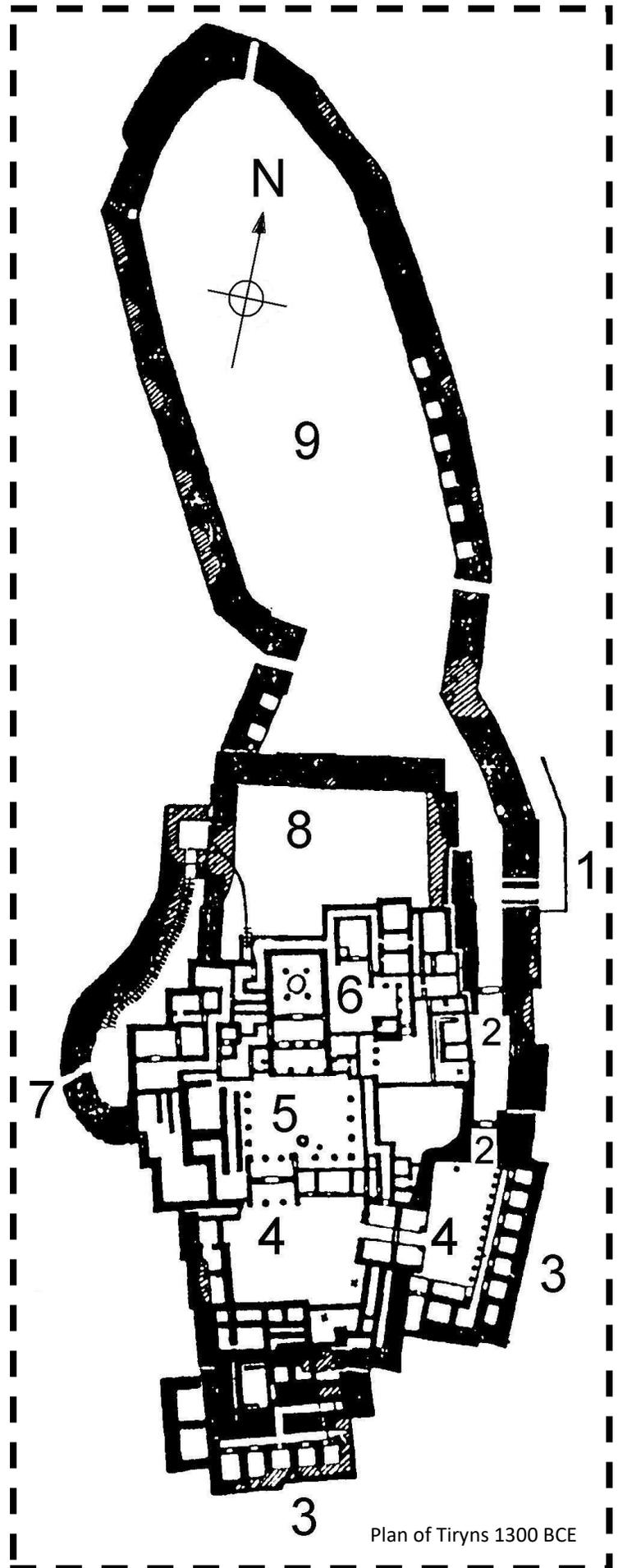


Tiryns was a hill fort it was one of the most important centers of the Mycenaean world . Its most notable features were its palace, its cyclopean tunnels and especially its walls, which gave the city its Homeric epithet of "mighty walled Tiryns".

The famous megaron of the palace of Tiryns has a large reception hall, the main room of which had a throne placed against the right wall and a central hearth bordered by four Minoan-style wooden columns that served as supports for the roof.

Ancient tradition held that the walls were built by the cyclopes because only giants of superhuman strength could have lifted the enormous stones.

Thus Greek legend links the three Argolic centers with three mythical heroes: Acrisius, founder of the Doric colony of Argos; his sibling (brother) Proetus, founder of Tiryns; and his grandson Perseus, the founder of Mycenae.



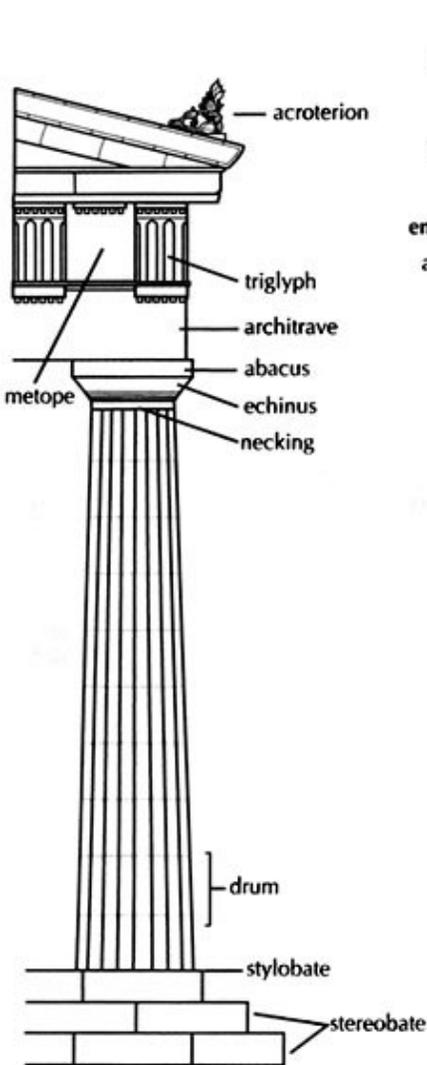
The order of the universe, believed so fervently by the Ancient Greeks, was reflected in the buildings themselves.

The proportional ideals employed by these mathematical architects was the so-called *Golden Mean*, a ratio also found in natural spiral forms like Nautilus shells and fern fronds.

Creating a perfectly proportional building had other desired consequences. It created an optical illusion. The end goal was, after all, how the building looked. They wanted perspective and concave results. Consequently, the major lines in the structure were rarely straight.

### Doric Order

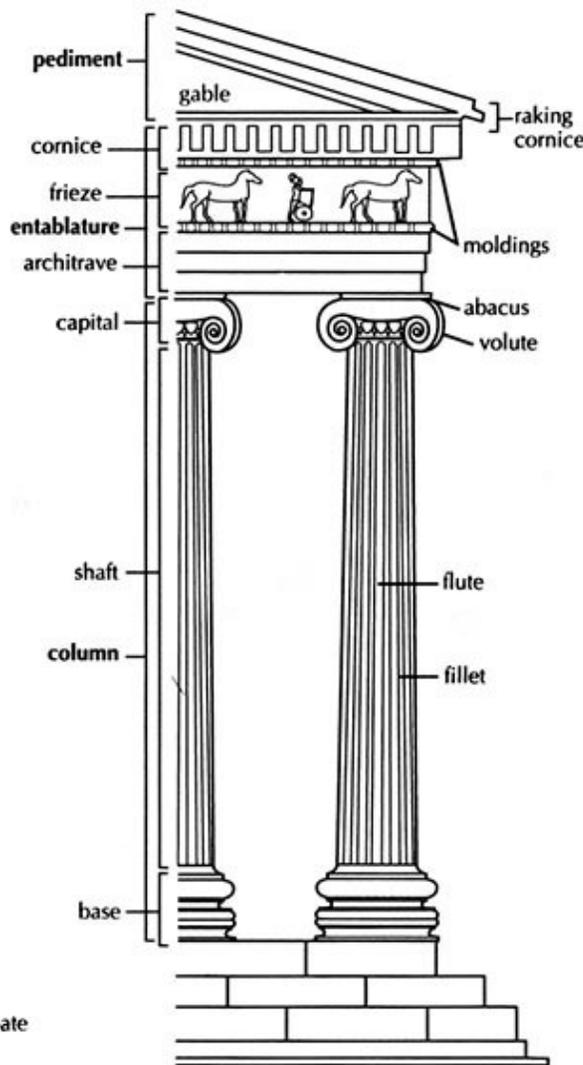
The most primitive order is termed 'Doric'. It is the serious, manly system that originated from wooden structures. It follows basic rules of harmony. Each column has to bear the weight of the beam laid across it. All the Triglyphs, or vertically channeled tablets, are arranged regularly. The columns themselves, short and stocky, stood initially without a base, and at a height of about six or seven times the diameter. The capital on the top of the pillar is basic.



Doric order

### Ionic Order

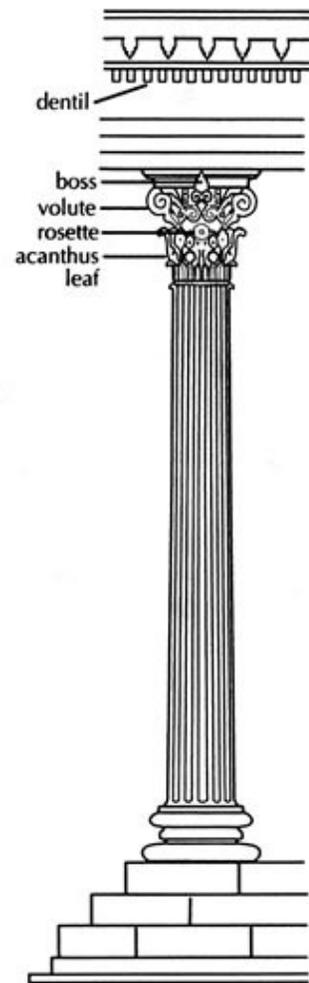
The Ionians' more effeminate column design, Ionic columns are most often fluted. This standardization was quite handy as it kept the fluting in a familiar, almost fragile, proportion to the diameter of the column... and at any scale. The system as a whole is characterized by its continuous friezes, and the scroll-like capitals, called volutes.



Ionic order

### Corinthian Order

Corinth is the most elaborate and engraved system of architecture, distinguished by the stylized acanthus leaves and stalks found in the Corinthian capitals. These columns appeared much later and were more popular in subsequent periods than its own.



Corinthian order

# Paestum

(448—432 BCE)

## Greece

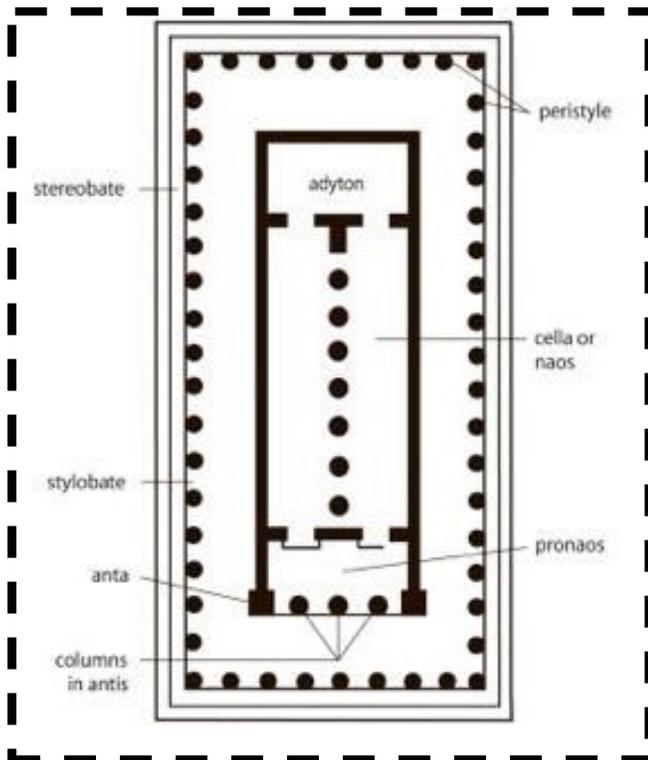
Paestum was a major ancient Greek city on the coast of the Tyrrhenian Sea.

Inscriptions and terracotta statuettes revealed that the goddess worshiped here was Hera. Later, an altar was unearthed in front of the temple, in the open-air site usual for a Greek altar. The faithful could attend rites



Temple of Hera I, Paestum 550 BCE

and sacrifices without entering the cella.



(plan) Temple of Hera I, Paestum 550 BCE

The columns of the temple of Hera (Paestum) have a very strong convex curve (for aesthetic purposes) down their length. The temple is wider than most Greek temples, there are two doors and a row of seven columns running centrally inside the **cella** or inner sanctuary, an unusual feature. This may reflect a dual dedication of the temple. Having an odd number of columns, here nine, across the shorter sides also is very unusual; there are eighteen columns along the longer sides.

Temple of Hera II, Paestum 550 BCE



# Hellenic

(479—323 BCE)



Iktinos and Kallikrates Statue of Athena at The Acropolis 479—323 BCE

## GREECE

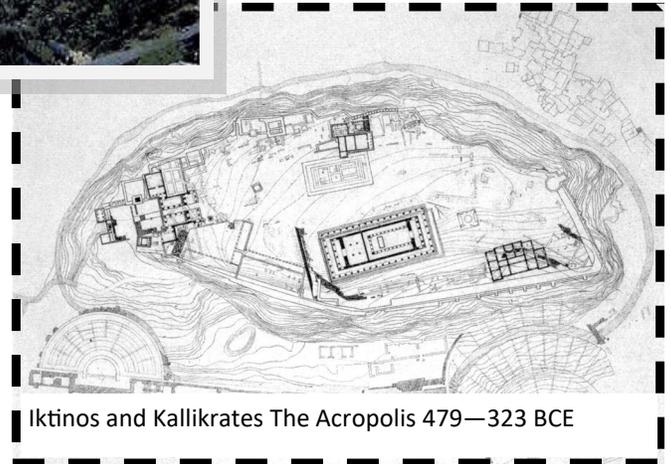
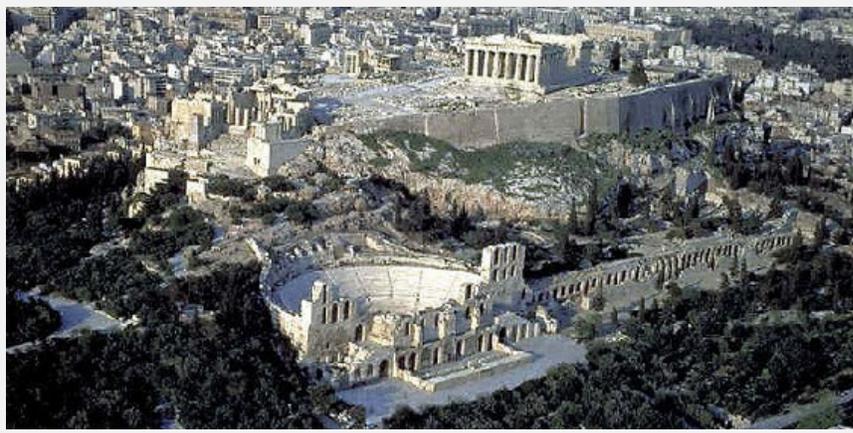
The colossal statue of Athena by Phidias was not related to any cult and is not known to have inspired any religious fervor. It did not seem to have any priestess, altar or cult name. Pericles once referred to the statue as a gold reserve, stressing that it "contained forty talents of pure gold and it was all removable". The Athenian statesman thus implies that the metal, obtained from contemporary coinage, could be used again without any impiety.

- ⇒ Athens emerged as the leading city in the mainland. To prevent further incursions by the Persians, it united with Ionian cities to form the Delian League.
- ⇒ All temples are entered in the east (where the sun rises).
- ⇒ The propylaea at the Acropolis has outer columns from the doric order, representing strength, however they are more slender than typically made, similar to ionic columns.
- ⇒ The inner columns were ionic, symbolizing the home and support of family life.
- ⇒ With the design of the buildings, they were no longer simply making buildings, they were incorporating light to make dramatic effects.
- ⇒ With the Greek temples, one looks up and to the oblique view, so you are now interacting with the sky and there is movement with the change of characters when viewed at 3/4.— very dynamic.



# Acropolis

(479 BCE)

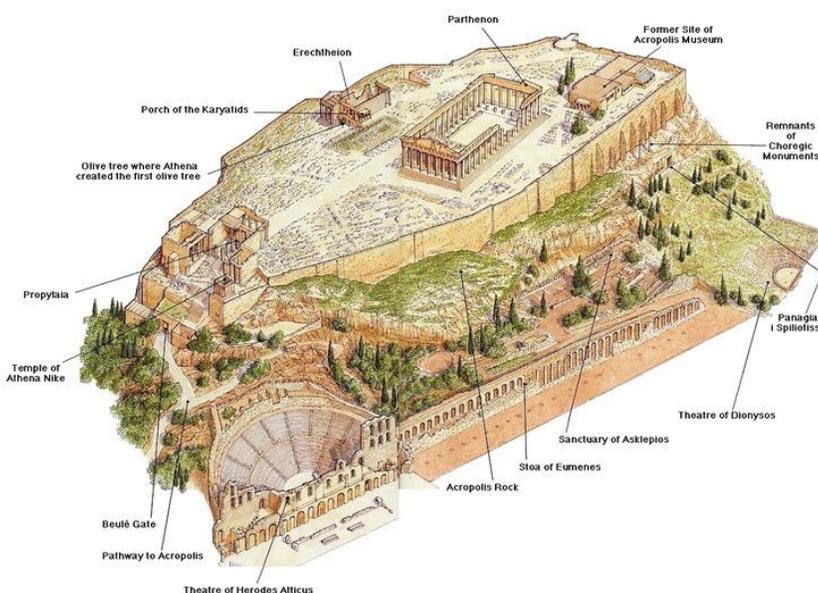


Iktinos and Kallikrates The Acropolis 479—323 BCE

- ⇒ The columns were adjusted to make the building look more pure.
- ⇒ The columns are not evenly spaced, they are more narrow at the ends and vary in thickness.
- ⇒ The material used—marble—is also a little opaque and translucent.
- ⇒ The architecture and art of Greece was that of being enlightened, and triumph over barbarism.

There was a

Iktinos and Kallikrates The Acropolis 479—323 BCE



pantheistic festival every four years on the birthday of Athena.

- ⇒ Athena's statue had removable gold, her eyes were jeweled and the inside was made of wood.

⇒ On her birthday, the light would enter from the east and it would make everything shine and sparkle.

⇒ Construction of the elegant temple of Erechtheion in Pentelic marble was in accordance with a complex plan which took account of the extremely uneven ground and the need to circumvent several shrines in the area. The entrance, facing east.

⇒ The Erechtheion at the Acropolis was home of Athenian King. It is the location of

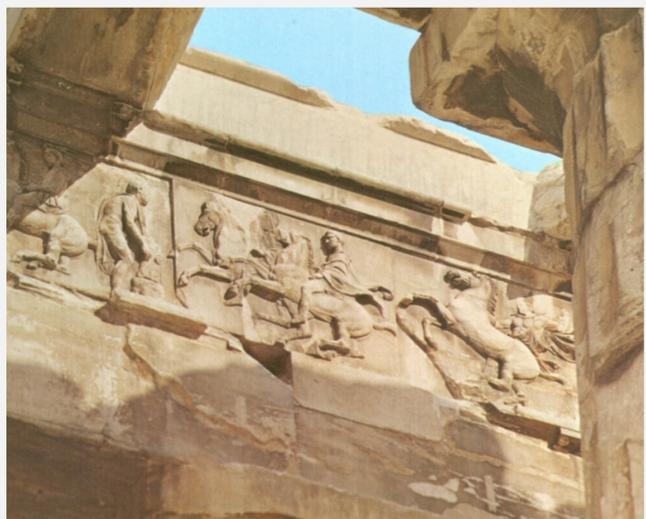
Athena being chosen with her gift of the olive tree, over Poseidon's salt water.

⇒ The Parthenon is regarded as an enduring symbol of Ancient Greece, Athenian democracy and western civilization, and one of the world's greatest cultural monuments.



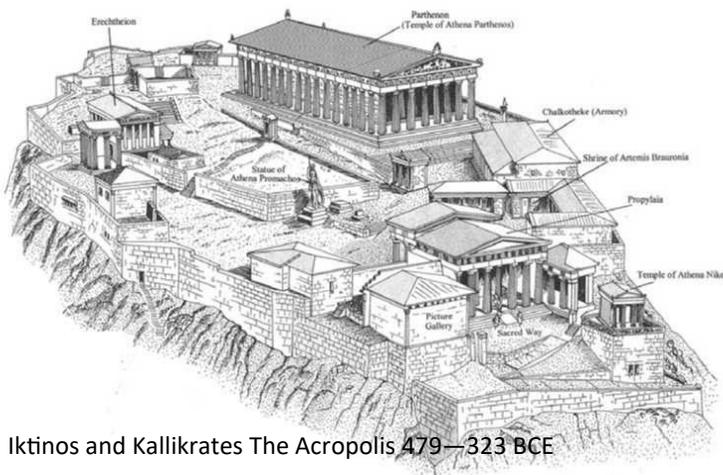
Iktinos and Kallikrates The Acropolis 479—323 BCE

⇒ The Parthenon itself replaced an older temple of Athena, which historians call the Pre-Parthenon or Older Parthenon, that was destroyed in the Persian invasion of 480 BC, some rubble was purposely left exposed as a scar so that they would never forget.



Frieze the Parthenon 448—432 BCE)

⇒ The narrative of the frieze begins at the southwest corner where the procession appears to divide into two separate files.



Iktinos and Kallikrates The Acropolis 479—323 BCE

# Knossos

(1550—1450 BCE)

Legend : Zeus offered a contest between Athena and Poseidon for the possession of Athens. Poseidon raised up his three-pronged trident, smashed it upon the hard rock of the Acropolis and out a salt spring well sprang. Athena on the other hand produced an olive tree which could help feed the people. This dramatic showdown between the two powerful Olympians was immortalized in stone, depicted on the West pediment sculptures of the Parthenon.

The Athenians chose Athena's gift and the olive tree has remained a central part of Greek life ever since for all of its profound qualities. The leaves have been used to crown the heads of victorious athletes, generals and kings, the oil used to give fuel to lamps, added to all food dishes and the olives themselves.



Ikynos and Kallikrates :The Erechtheion 421—407 BCE





Iktinos and Kallikrates The Acropolis 479—323 BCE

Plato’s pronouncements on architecture, perhaps best known is his exoneration of it as it promotes the social good and as a non-mimetic, hence non-deceptive, artform (as contrasts with sculpture). He further characterizes architecture and allied enterprises as progressing through exact measurement—comparing favorably with music, which relies in its development on iterative experience. Plato also locates the kind of knowledge architecture represents in the domain of the **praktike** (knowing how), as aligned with **techne** (the practical arts) and in contrast with **gnostike** (experientially knowing that) or **episteme** (by way of theory or reason knowing that). Such practical knowledge is delivered not as judgments (as with mathematics) but as instructions or commands, in the manner of managerial knowledge.

Surely, then, to him who has an eye to see, there is no fairer spectacle than that of a man who combines the possession of moral beauty in his soul with outward beauty of form, corresponding and harmonizing with the former, because the same great pattern enters into both.

Plato: The Republic of Plato 380 BCE

Aristotle presents the four causes drawing on the example of causal roles in the architecture of a temple . For example, the architect’s idea of the temple, as realized through craftsmanship of the workers whom the architect commands, represents the efficient cause of the temple—whereas the architect’s vision of or plan for the temple (not necessarily realized) provides the formal cause. Elsewhere, pursuing a holist picture of biological explorations as the “total form” of animals.

# Hellenistic

(150—145 BCE)

⇒ The Hellenic period ended because of rivalries and infighting that opened them up to external forces

⇒ Tholos, Sanctuary of Asklepios has a circular form that is eventually picked up by the Romans.

Phillip of Macedon came from the north annexing all of Greece, he was the father of Alexander the Great—who was a student of Aristotle.

Alexander the Great was a great warrior, who conquered everything that we know today as Greece, however Persia proved to be different. Rather than fight and destabilize their country, the two powers exchanged family members. Eventually, Alexander began to embrace their thinking.



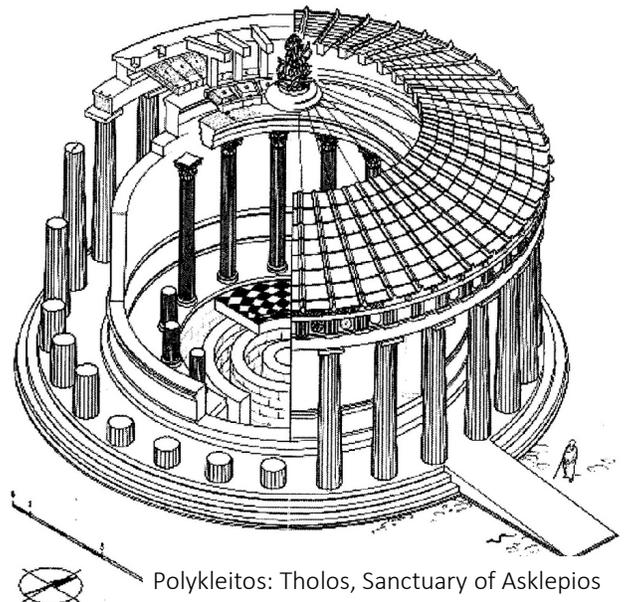
Polykleitos: Tholos, Sanctuary of Asklepios at Epidaurus  
360—330 BCE

This did not please some people close to Alexander, it is believed that either Aristotle or his own mother sent a soldier to Persia to poison him. He died at thirty-three.

At Tholos Sanctuary of Asklepios, they began to favor the Corinthian order. The columns in this particular place eliminate limitations placed on the doric order.

Tholos was the god of good health, son of appollo. These baths promoted everything good; good diet, exercise, medicine, and overall health.

These bathes were the center of Roman life. This bath has 26 doric columns—supporting the public life, and 14 corinthium columns that represent the young maiden.



Polykleitos: Tholos, Sanctuary of Asklepios



Theatre, Sanctuary of Asklepios 350 BCE—2nd Century

Aside from the baths, people would enjoy performances performed in amphitheaters.

The amphitheater had circular seating, and it had even distribution of sound—it would resonate like in a bowl.

The stage was made up of the orchestra, the skene and the proskenion. People would reflect light, burn things to create smoke and bang on things for effects.

A group of performers would repeat the lines back from the actors in song and dance, making physical the experience, it allowed people to experience empathy.

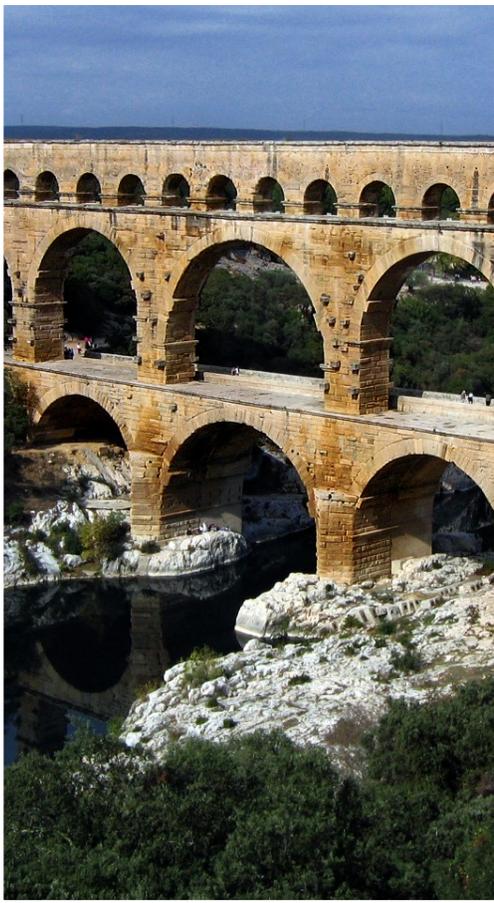
### Performance Sequence at amphitheaters:

**Tragedies:** Gave a lesson of ethics, with catharsis roles to help people understand and free themselves of the struggles of everyday life

Intermission: **Satire:** slapstick and slightly raunchy humor.

**Comedies:** light everyday stories to provide balance.

# Roman Kingdom



Pont du Gard, Nîmes, 20—16 BCE

## ROMAN KINGDOM

Water channels was at the uppermost level where it maintained a constant incline to carry the water through gravity flow into the city of Nîmes. Aqueducts ran along the contours of the land whenever possible, but engineers used arches to span the gap when a valley needed to be crossed.

### Tuscany

It is believed that the Etruscans migrated onto the Italian peninsula from Asia Minor 1200 BCE after the collapse of the Hittite power.

The Etruscans had many cultural connections, such as their language, which had both European and non-Indo-European elements, and was written in a script derived directly from Greek.

Their religion placed great emphasis on providing worldly goods for the afterlife, similar to that of Egypt.

Their art is like the Hittites, it shares relief carvings of protective beasts at tomb entrances, but also naturalistic decorations depicting birds and dolphins like the Minoans and Mycenaean.

They read omens from the entrails of animals like Babylon and Assyria, and they use the arch and vault in monumental gateways such as Asia Minor.

# Tombs at Cerveteri

Evidence from their architectural design is scarce, and what has been gathered comes from tombs and funerary urns made in the shape of miniature dwellings.

Tomb excavations provide hints about upper-class housing. The rooms were hollowed out of easily carved volcanic



Tombs at Cerveteri (900—200 BCE tentative)

beams and moldings have been produced.

Furniture such as chairs, cooking utensils and other items were probably carved from stone.

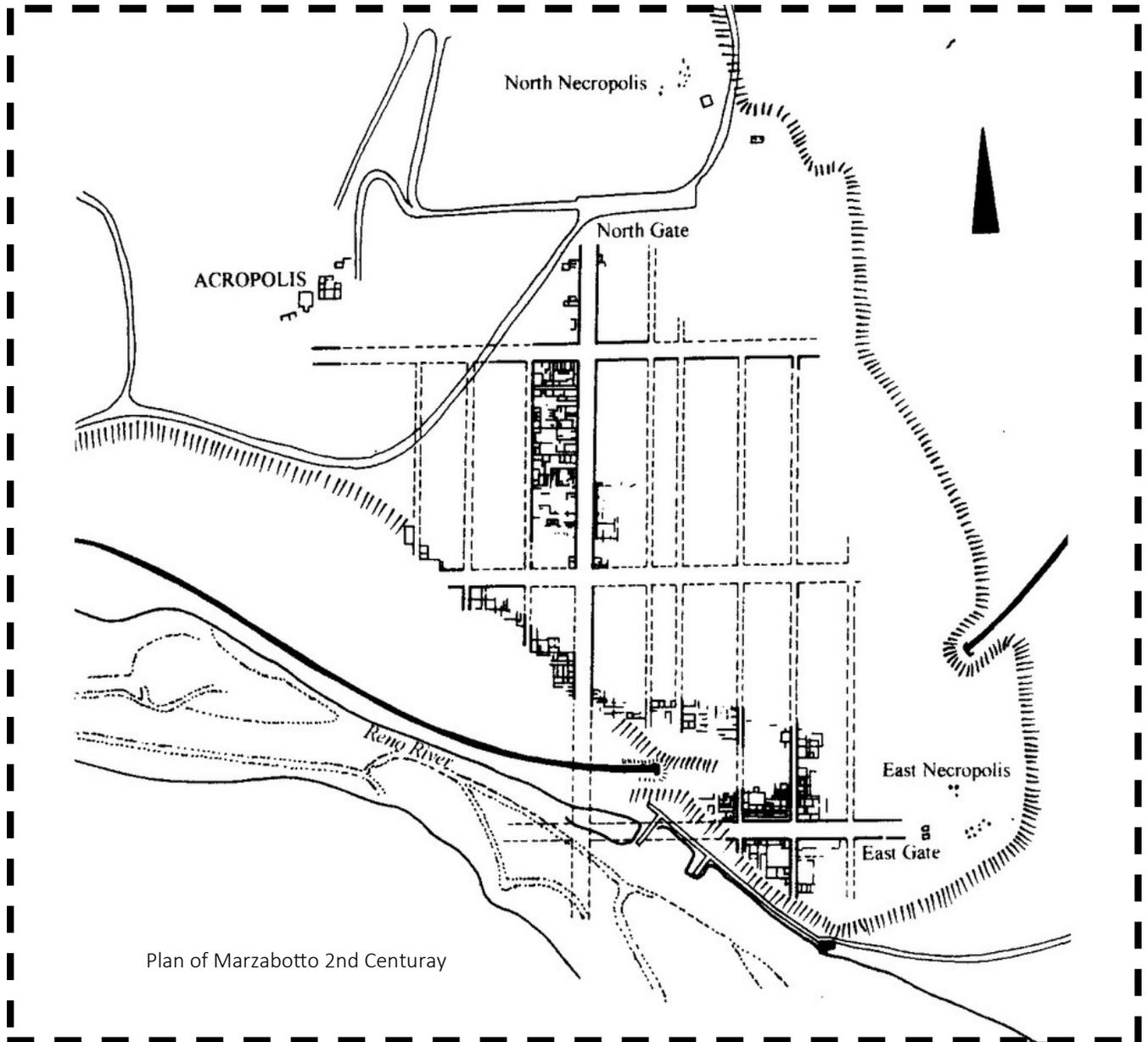


Tombs at Cerveteri (900—200 BCE tentative)

rock and were entered through a vestibule and grouped around an inner court which suggests an atrium.

Some tombs feature doors, roof

# Marzabotto



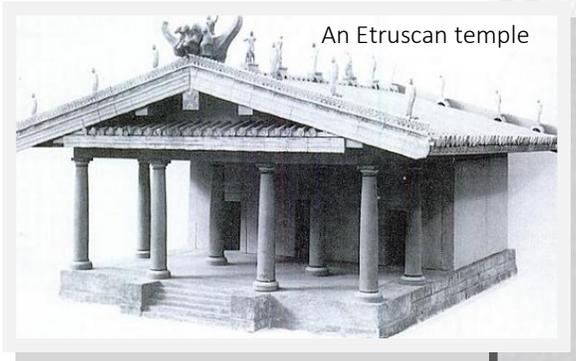
## Tuscany

Etruscan settlements seem to have been loosely organized into autonomous city-states, and their economy was based on agriculture and international trade, especially in metals.

Tin was imported from Britain, silver from Spain, and iron and copper were widely available.

Their city of Marzabotto near Bologna, had a grid plan, with the main streets running perpendicular to one another and intersecting in similar plans for their military camps.

# Etruscan Temples

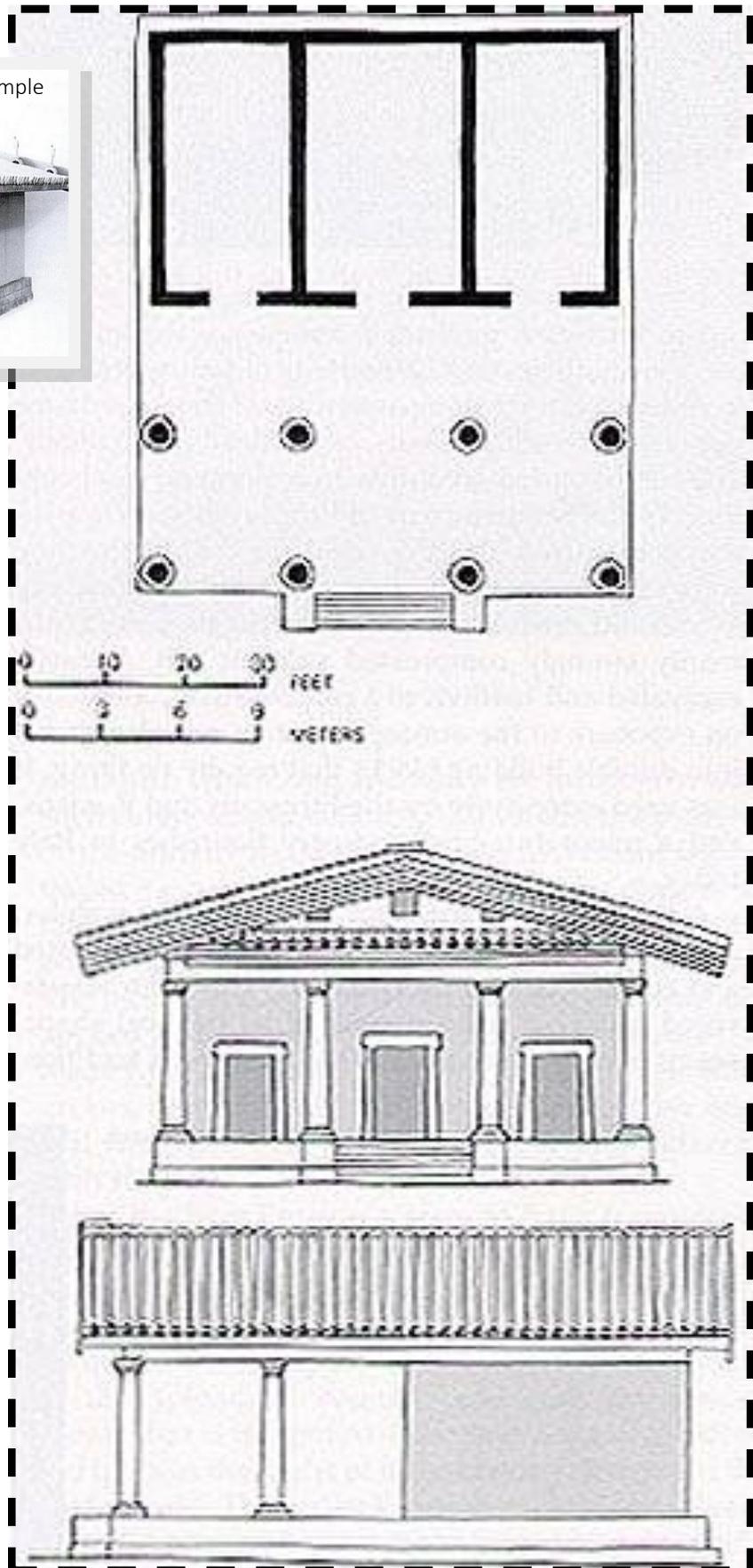


Etruscans borrowed the orders of architecture and the temple form from Greece, however they modified both to suit their own purposes.

Etruscan temples usually contained a tripartite cella oriented in only one direction (usually to the south). The temple was set on a high podium, covered with a gable roof, and approached through a double row of columns set at the top of a single flight of stairs.

They had the basic characteristics of the Doric, but no fluting on the column shafts or sculpture on the frieze—it was very simplified. Both the columns and roof structure were built of wood, while the walls were unbaked brick.

Etruscan temples did not survive due to the impermanence of the materials used.





Arch of Augustus 310 BCE

## Perugia

Though many dwellings did not withstand time, the monumental gateway “Arch of Augustus” still exists. Above the double row of wedge-shaped forming the gateway arch is a decorative motif consisting of metopes and triglyphs similar to a Doric frieze.

A relieving arch flanked by Ionic pilasters is set atop the band of Doric-inspired ornament.

The Romans would then go on and employ the arch and vault for structure using the orders to articulate and enliven the intervening section wall.